To watch an in-depth discussion on the topic, click on the YouTube link below: https://www.youtube.com/@PatrioticIAS

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25_12_2024 DAILY CURRENT AFFAIRS

TOPICS COVERED

1. **Khel Ratna list not final: officials; Manu suggests it's her 'lapse' / खेल रत्न सूची अंतिम नहीं: अधिकारी; मनु ने कहा कि यह उनकी 'चूक' है (PCS)**
2. **Congress moves SC over change in Election Rules / कांग्रेस ने चुनाव नियमों में बदलाव के खिलाफ सुप्रीम कोर्ट का दरवाजा खटखटाया (GS Paper-II: Polity: Elections)**
3. **Filmmaker Shyam Benegal given three-gun salute as stars line up to bid him farewell / फिल्मकार श्याम बेनेगल को तीन तोपों की सलामी दी गई, सितारों ने उन्हें अंतिम विदाई दी (PCS)**
4. **Hide and seek / लुकाछिपी (GS Paper-II: Elections)**
5. **Myth of meritocracy, caste-based disparities in IT sector / आईटी क्षेत्र में योग्यता का मिथक, जाति-आधारित असमानताएं (GS Paper-III: Inequality)**
6. **Damning silence / शापित चुप्पी (PCS: Pegasus probe)**
7. **India got 14.3% of global remittances in 2024, its highest ever / 2024 में भारत को वैश्विक प्रेषण का 14.3% प्राप्त होगा, जो अब तक का सर्वाधिक है (GS Paper-III: National Accounting)**

8. **What is quantum computing? / क्वांटम कंप्यूटिंग क्या है? (GS Paper-III: S&T)**
9. **Why are activists opposing EC's election rule amendment? / कार्यकर्ता चुनाव आयोग के चुनाव नियम संशोधन का विरोध क्यों कर रहे हैं? (GS Paper-II: EC's Election Rule Amendment**
10. **Management lessons from Akbar the Great's handbook / अकबर महान की पुस्तिका से प्रबंधन के सबक (GS Paper-I: Medieval History)**
11. **President Murmu names Ajay Bhalla Manipur Governor / राष्ट्रपति मुर्मू ने अजय भल्ला को मणिपुर का राज्यपाल नियुक्त किया (PCS)**
12. **Rooppur nuclear project is for well-being of people of Bangladesh: Russia's Rosatom / रूपपुर परमाणु परियोजना बांग्लादेश के लोगों की भलाई के लिए है: रूस के रोसाटॉम (GS Paper-II: India-Bangladesh Russia)**
13. **The universe's speed limit / ब्रह्माण्ड की गति सीमा (GS Paper-III: S&T)**

PATRIOTIC IAS

Khel Ratna list not final: officials; Manu suggests it's her 'lapse'

PCS

Press Trust of India
NEW DELHI

Amid a raging controversy over her "exclusion" from the list of Khel Ratna nominees, double Olympic medallist Manu Bhaker on Tuesday said "there has been a lapse, maybe on my part while filing for the nomination".

A day after the Sports Ministry had to step in to do damage control after the selection committee for the Major Dhyan Chand Khel Ratna Award reportedly did not recommend her name, the 22-year-old pistol ace took to social media to clarify her position.

However, Ministry sources said that the names were yet to be finalised and her name would be there when the final list was released in a week.

On Monday, her coach, Jaspal Rana, and father, Ram Kishan Bhaker, lambasted the Sports Ministry and the award selection committee for overlooking Ms. Bhaker despite her achievements.

Manu Bhaker

In a post on X, Ms. Bhaker said: "With regards to ongoing issue for my nomination for the most prestigious Khel Ratna award – I would like to state that as an athlete my role is to play and perform for my country."

"I believe there has been a lapse, maybe on my part while filing for the nomination which is being corrected."

The Haryana shooter said her aim is to perform for the country whether she gets an award or not. "Awards and recognition keeps me motivated but are not my goal," she asserted.

"Irrespective of the award I shall remain motivated to win more medals for my country. It is a request to everyone, please do not speculate on this."

In August, Ms. Bhaker became Independent India's first athlete to win two medals in a single edition of the Olympics with her bronze-winning show in the 10m air pistol individual and 10m air pistol mixed team events in Paris.

Mr. Rana, a decorated shooter himself, castigated the Sports Ministry, the Sports Authority of India, and the National Rifle Association of India, holding them responsible for "ignoring" his ward's credentials for the Award.

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Khel Ratna list not final: officials; Manu suggests it's her 'lapse'

खेल रत्न सूची अंतिम नहीं: अधिकारी; मनु ने कहा कि यह उनकी 'चूक' है

Amid a raging controversy
एक उफनती विवाद के बीच

- Over her "**exclusion**" from the list of **Khel Ratna nominees**, double Olympic medallist **Manu Bhaker** on Tuesday said "there has been a lapse, maybe on my part while filing for the nomination."
  खेल रत्न नामांकनों से अपनी "**बाहर किए जाने**" के बारे में, दो बार ओलंपिक पदक विजेता **मनु भाकर** ने मंगलवार को कहा, "**मेरे द्वारा नामांकन दाखिल करते समय कोई चूक** हो सकती है।"
- A day after the **Sports Ministry** had to step in to do **damage control** after the **selection committee** for the **Major Dhyan Chand Khel Ratna Award** reportedly did not recommend her name, the 22-year-old **pistol ace** took to **social media** to clarify her position.
  खेल मंत्रालय को एक दिन बाद **नुकसान नियंत्रण** करने के लिए कदम उठाना पड़ा, क्योंकि **मैजर ध्यानचंद खेल रत्न पुरस्कार** की **चयन समिति** ने उसकी नाम सिफारिश नहीं की थी, 22 साल की **पिस्तौल खिलाड़ी** ने अपनी स्थिति स्पष्ट करने के लिए **सोशल मीडिया** का सहारा लिया।
- However, **Ministry sources** said that the names were yet to be finalized and her name would be there when the final list was released in a week.
  हालांकि, **मंत्रालय के सूत्रों** ने कहा कि नाम अभी तक **अंतिम रूप से तय नहीं हुए हैं** और उसकी नाम **अंतिम सूची में** एक सप्ताह में शामिल किया जाएगा।
- On **Monday**, her coach, **Jaspal Rana**, and father, **Ram Kishan Bhaker**, lambasted the **Sports Ministry** and the **award selection committee** for overlooking Ms. Bhaker despite her achievements.
  सोमवार को, उसके कोच, **जसपाल राणा**, और पिता, **राम किशन भाकर**, ने **खेल मंत्रालय** और **पुरस्कार चयन समिति** की आलोचना की कि उन्होंने **मनु भाकर** की उपलब्धियों के बावजूद उनकी उपेक्षा की।

PATRIOTIC IAS

- In a post on **X**, Ms. Bhaker said: "With regards to ongoing issue for my **nomination** for the most prestigious **Khel Ratna award** — I would like to state that as an athlete my role is to **play** and **perform** for my country."
  X पर एक पोस्ट में, **मनु भाकर** ने कहा: "मेरे **खेल रत्न पुरस्कार** के लिए **नामांकन** को लेकर चल रहे मुद्दे के बारे में – मैं यह स्पष्ट करना चाहती हूं कि एक **खिलाड़ी** के रूप में मेरी भूमिका **खेलना** और **अपने देश के लिए प्रदर्शन** करना है।"
- "I believe there has been a **lapse**, maybe on my part while filing for the nomination which is being corrected."
  "मुझे विश्वास है कि **नामांकन** दाखिल करते समय **कोई चूक** हो सकती है, जिसे सुधारने की कोशिश की जा रही है।"
- The **Haryana shooter** said her aim is to **perform** for the country whether she gets an **award** or not.
  हरियाणा की शूटिंग खिलाड़ी ने कहा कि उनका उद्देश्य **देश के लिए प्रदर्शन** करना है चाहे उन्हें **पुरस्कार** मिले या नहीं।
- "**Awards** and recognition keeps me motivated but are not my goal," she asserted.
  "**पुरस्कार** और पहचान मुझे प्रेरित करते हैं लेकिन ये मेरा लक्ष्य नहीं हैं," उन्होंने जोर देकर कहा।
- "Irrespective of the award I shall remain motivated to win more **medals** for my country. It is a request to everyone, please do not speculate on this."
  "**पुरस्कार** की परवाह किए बिना मैं अपने देश के लिए अधिक **पदक** जीतने के लिए प्रेरित रहूंगी। यह सभी से निवेदन है कि कृपया इस पर **अटकले** न लगाएं।"
- In **August**, Ms. Bhaker became **Independent India's first athlete** to win **two medals** in a single edition of the Olympics with her **bronze-winning show** in the **10m air pistol individual** and **10m air pistol mixed team events** in **Paris**.
  अगस्त में, **मनु भाकर** ने **स्वतंत्र भारत की पहली खिलाड़ी** बनकर ओलंपिक के एक ही संस्करण में **दो पदक** जीतने का रिकॉर्ड कायम किया, जिसमें उन्होंने **10 मीटर एयर पिस्तौल व्यक्तिगत** और **10 मीटर एयर पिस्तौल मिश्रित टीम इवेंट्स** में **पैरिस** में **कांस्य पदक** जीते।
- Mr. **Rana**, a decorated shooter himself, castigated the **Sports Ministry**, the **Sports Authority of India**, and the **National Rifle Association of India**, holding them responsible for "**ignoring**" his ward's credentials for the Award.
  राणा जी, जो खुद एक सम्मानित शूटर हैं, ने **खेल मंत्रालय**, **खेल प्राधिकरण भारत**, और **नेशनल राइफल एसोसिएशन ऑफ इंडिया** की आलोचना की, और उन्हें **पुरस्कार** के लिए उनकी **अवहेलना** करने के लिए जिम्मेदार ठहराया।

PATRIOTIC IAS

Congress moves SC over change in Election Rules

Amendment restricting public access to CCTV camera footage from polling booths and video recordings of candidates comes after HC order to release materials from Haryana Assembly polls

GS Paper II: Polity: Elections

NEW DELHI

The Congress on Tuesday challenged the amendments made to the Conduct of Election Rules of 1961 that restricted the citizens' right to access certain election-related records.

Congress leader Jairam Ramesh moved the top court against the change in the poll rules, which reduces public access to CCTV camera footage from polling booths and video recordings of candidates.

The amendment was made to sub-rule (2) of Rule 93 of the 1961 Rules, which had previously allowed the public to examine papers related to elections without any exception.

Access limited

Amendment to the Conduct of Election Rules, 1961 limits public access to certain election-related records

■ While there was unrestricted access to election-related records earlier, it is now **restricted**. CCTV footage and video recordings are no longer freely available

■ While the government has said that the amendment protects the process from **false narratives** or misuse of electronic records, there are concerns that it reduces **transparency** and **accountability** in the electoral process

The amendment, notified on December 20 by the Union Law and Justice Ministry, had restricted access to only certain election records specifically mentioned in the Rules.

Officials have reportedly justified the move, saying it was to protect the poll process from false narratives through misuse or doctoring of electronic records.

However, the amendment came shortly after a Punjab and Haryana High Court direction to the Election Commission to provide an advocate records pertaining to the recent Haryana Assembly election.

The advocate had filed a petition seeking videography, CCTV footage, and copies of Forms 17-C Parts I and II from the Assembly election.

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HIDE AND SEEK
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EC rejects Cong. claims on polls as 'misleading'

NEW DELHI

The Election Commission has rejected as "factually incorrect and misleading" the Congress's claims of "arbitrary deletion" and "subsequent addition" in electoral rolls and ruled out discrepancies in voter turnout data in Maharashtra Assembly election. » PAGE 17

Congress moves SC over change in Election Rules

कांग्रेस ने चुनाव नियमों में बदलाव के खिलाफ सुप्रीम कोर्ट का दरवाजा खटखटाया

Congress Challenges Amendments to Election Rules
कांग्रेस ने चुनाव नियमों में किए गए संशोधनों को चुनौती दी

- The **Congress** on Tuesday challenged the amendments made to the **Conduct of Election Rules of 1961** that restricted the citizens' right to access certain **election-**

related records.

कांग्रेस ने मंगलवार को **1961 के चुनाव आचार संहिता नियमों** में किए गए संशोधनों को चुनौती दी, जिनसे नागरिकों का कुछ **चुनाव-संबंधी रिकॉर्ड्स** तक पहुंचने का अधिकार सीमित हो गया।

- **Congress leader Jairam Ramesh** moved the top court against the change in the **poll rules**, which reduces public access to **CCTV camera footage** from polling booths and **video recordings** of candidates.

  कांग्रेस नेता जयराम रमेश ने शीर्ष अदालत में **चुनाव नियमों** में किए गए बदलाव के खिलाफ याचिका दायर की, जो **मतदान केंद्रों** से **सीसीटीवी फुटेज** और **उम्मीदवारों के वीडियो रिकॉर्डिंग** तक जनता की पहुंच को सीमित करता है।
- The **amendment** was made to sub-rule (2) of **Rule 93** of the 1961 Rules, which had previously allowed the public to examine papers related to elections **without any exception**.

  संशोधन 1961 के नियमों के **नियम 93** के उप-नियम (2) में किया गया था, जो पहले जनता को **चुनावों से संबंधित दस्तावेजों** को **किसी भी अपवाद के बिना** जांचने की अनुमति देता था।
- The **amendment**, notified on **December 20** by the **Union Law and Justice Ministry**, had restricted access to only certain **election records** specifically mentioned in the Rules.

  संशोधन, जो **20 दिसंबर** को **केंद्रीय विधि और न्याय मंत्रालय** द्वारा अधिसूचित किया गया था, ने केवल कुछ **चुनाव रिकॉर्ड्स** तक पहुंच को सीमित कर दिया था, जो नियमों में विशेष रूप से उल्लिखित थे।
- **Officials** have reportedly justified the move, saying it was to protect the **poll process** from **false narratives** through **misuse** or **doctoring** of electronic records.

  अधिकारियों ने इस कदम का **सिद्धांत** बताते हुए कहा कि यह **चुनावी प्रक्रिया** को **झूठी naratives** से बचाने के लिए था, जो **इलेक्ट्रॉनिक रिकॉर्ड्स** के **दुरुपयोग** या **छेड़छाड़** के माध्यम से फैल सकती थीं।
- However, the amendment came shortly after a **Punjab and Haryana High Court** direction to the **Election Commission** to provide an **advocate** records pertaining to the recent **Haryana Assembly election**.

  हालांकि, यह संशोधन **पंजाब और हरियाणा उच्च न्यायालय** के आदेश के कुछ समय बाद आया, जिसमें **चुनाव आयोग** को हाल की **हरियाणा विधानसभा चुनाव** से संबंधित **वकील** को रिकॉर्ड उपलब्ध कराने का निर्देश दिया गया था।
- The **advocate** had filed a petition seeking **videography**, **CCTV footage**, and copies of **Forms 17-C Parts I and II** from the **Assembly election**.

  वकील ने **वीडियोग्राफी**, **सीसीटीवी फुटेज**, और **फॉर्म 17-सी भाग I और II** की प्रतियां **विधानसभा चुनाव** से प्राप्त करने के लिए एक याचिका दायर की थी।

PATRIOTIC IAS

Filmmaker Shyam Benegal given three-gun salute as stars line up to bid him farewell

PCS

Press Trust of India
MUMBAI

The mortal remains of filmmaker Shyam Benegal being taken for last rites in Mumbai on Tuesday. ANI

Veteran filmmaker Shyam Benegal, the pioneer of the parallel cinema movement in Indian cinema in the 1970s and 1980s, was cremated on Tuesday with full State honours and a three-gun salute here.

Benegal, known for films such as *Ankur, Mandi, Nishant*, and *Junoon*, died on Monday at a hospital here due to chronic kidney disease.

The last rites of the filmmaker, who celebrated his 90th birthday on December 14, were held around 3 p.m. at Dadar's Shivaji Park crematorium. His body was wrapped in the National Flag and decked with garlands.

Benegal's cinema contemporaries, colleagues and younger generations of actors and artists accompanied wife Nira and daughter Pia in paying their last respects to the icon, whose movies captured the many realities of India.

Naseeruddin Shah, Rajit Kapoor, Kulbhushan Kharbanda, and Ila Arun, who starred in many of Benegal's films, were present to bid adieu to the director. A priest later performed a puja in the memory of the filmmaker.

There are some things which cannot be expressed in words, said a visibly emotional Mr. Shah.

"I think you should try to understand what's in my heart. Shyam *saheb*, I owe everything I am and everything I have to him. I really don't know what else to say," he said.

Filmmaker Govind Nihalani, who lensed many of Benegal's films, could only manage a "I can't say anything, please."

Filmmaker Shyam Benegal given three-gun salute as stars line up to bid him farewell

फिल्मकार श्याम बेनेगल को तीन तोपों की सलामी दी गई, सितारों ने उन्हें अंतिम विदाई दी

Veteran Filmmaker Shyam Benegal Cremated with State Honours

प्रसिद्ध फिल्म निर्माता श्याम बेनेगल को राजकीय सम्मान के साथ दाह संस्कार किया गया

- **Veteran filmmaker Shyam Benegal**, the pioneer of the **parallel cinema movement** in Indian cinema in the **1970s** and **1980s**, was cremated on Tuesday with **full State honours** and a **three-gun salute** here.

  प्रसिद्ध फिल्म निर्माता श्याम बेनेगल, जो **1970** और **1980** के दशक में भारतीय सिनेमा में **पैरेलल सिनेमा आंदोलन** के अग्रदूत थे, का मंगलवार को **राजकीय सम्मान** और **तीन बंदूकों की सलामी** के साथ दाह संस्कार किया गया।

- Benegal, known for films such as **Ankur, Mandi, Nishant,** and **Junoon**, died on **Monday** at a hospital here due to **chronic kidney disease**.

  बेनेगल, जो **अंकुर**, **मंडी**, **निशांत** और **जुनून** जैसी फिल्मों के लिए जाने जाते थे, सोमवार को यहां एक अस्पताल में **क्रोनिक किडनी डिजीज** के कारण निधन हो गए।

- The last rites of the filmmaker, who celebrated his **90th birthday** on **December 14**, were held around **3 p.m.** at **Dadar's Shivaji Park crematorium**. His body was wrapped in the **National Flag** and decked with **garlands**.

PATRIOTIC IAS

फिल्म निर्माता के अंतिम संस्कार की क्रिया, जिन्होंने **14 दिसंबर** को अपना **90वां जन्मदिन** मनाया, **दादर के शिवाजी पार्क श्मशान घाट** पर **3 बजे** के आसपास की गई। उनके शरीर को **राष्ट्रीय ध्वज** में लपेटा गया और **माला** अर्पित की गई।

- Benegal's cinema contemporaries, colleagues, and younger generations of actors and artists accompanied wife **Nira** and daughter **Pia** in paying their last respects to the icon, whose movies captured the many realities of India.
  बेनेगल के सिनेमा के समकालीन, सहयोगी और नयी पीढ़ी के अभिनेता और कलाकार अपनी पत्नी **नीरा** और बेटी **पिया** के साथ उस प्रतीक को श्रद्धांजलि अर्पित करने के लिए उपस्थित हुए, जिनकी फिल्मों ने भारत की **विविध वास्तविकताओं** को प्रदर्शित किया।
- **Naseeruddin Shah, Rajit Kapoor, Kulbhushan Kharbanda,** and **Ila Arun**, who starred in many of Benegal's films, were present to bid adieu to the director.
  नसीरुद्दीन शाह, **राजित कपूर**, **Kulbhushan Kharbanda** और **इला अरुण**, जो बेनेगल की कई फिल्मों में अभिनय कर चुके थे, निर्देशक को अलविदा कहने के लिए उपस्थित थे।
- A priest later performed a **puja** in the memory of the filmmaker.
  बाद में एक पंडित ने फिल्म निर्माता की **श्रद्धांजलि** में **पूजा** अर्पित की।
- There are some things which cannot be expressed in words, said a visibly emotional **Mr. Shah**.
  "कुछ ऐसी बातें हैं जो शब्दों में व्यक्त नहीं की जा सकतीं," **शाह** ने कहा, जो भावुक रूप से दिखाई दे रहे थे।
- **"I think you should try to understand what's in my heart. Shyam saheb, I owe everything I am and everything I have to him. I really don't know what else to say,"** he said.
  "मुझे लगता है कि आपको मेरे दिल की बात समझने की कोशिश करनी चाहिए। श्याम साहब, मैं जो कुछ भी हूं और जो कुछ भी मेरे पास है, वह सब उनका ही है। मुझे सच में नहीं पता और क्या कहूं," उन्होंने कहा।
- Filmmaker **Govind Nihalani**, who lensed many of Benegal's films, could only manage a **"I can't say anything, please."**
  फिल्म निर्माता **गोविंद निहलानी**, जिन्होंने बेनेगल की कई फिल्मों की **कैमरा कार्य** किया, केवल **"मैं कुछ नहीं कह सकता, कृपया"** ही कह सके।

PATRIOTIC IAS

GS Paper II: Elections

Hide and seek

Transparency is key in maintaining the credibility of the election process

The Election Commission of India (ECI)'s explanation on December 24 in response to the Congress party's charges regarding voter turnout data in the recent Assembly elections is unlikely to allay growing concerns regarding the integrity of the election process. It was on December 20, on the recommendations of the ECI, that the Centre had amended the Conduct of Election Rules to restrict public access to poll documents except for those that are specifically mentioned in them. The ECI has also said it does not want to share CCTV footage of the booth, citing privacy and security reasons. This change in the rules happened after the Punjab and Haryana High Court directed the ECI to share all documents related to the Haryana Assembly elections, including CCTV footage, to a private citizen. The court ruled that this was permissible under 93(2) of the Rules which allowed public access to all "papers" which were not specifically barred. The amended rule now says that only those "papers" that are specified in it are open to public inspection. For an institution that is so central to the functioning of democracy, and yet facing an unprecedented challenge to its credibility, less secrecy and more transparency must be the way forward. Sadly, the ECI is falling short on this count, and damaging its own credibility.

Allegations of electronic tampering of voting machines are misplaced and misguided but concerns regarding the conduct of elections – police high-handedness, partisanship of local administration, and voter suppression through various means – are valid. They require a thorough and impartial investigation. Of particular concern is the dramatic rise in voter turnout in the final figures, compared to what was announced at the end of polling time, noticed in recent elections. The ECI may well be right in saying that voters who are in queue at the closing hour get recorded only in the final figures. But the easiest and perhaps the most credible way to establish this claim is to allow wide inspection of the relevant video footage. The ECI has explained that the candidates have access to all documents, papers and records and nothing has been amended in the rules in this regard. It remains unclear how its officials will deal with requests from candidates for records including video footage while the public will face a default denial in most cases. The privacy and security arguments are weak if candidates can access records anyway. In effect, the change in rules does not solve any problem that the ECI says it does, other than time and effort. And it has raised more questions about the ECI's intentions.

Hide and seek

लुकाछिपी

Election Commission's Response to Congress on Voter Turnout Concerns

कांग्रेस द्वारा उठाए गए मतदाता टर्नआउट के मुद्दों पर चुनाव आयोग की प्रतिक्रिया

- The **Election Commission of India (ECI)**'s explanation on **December 24** in response to the Congress party's charges regarding **voter turnout data** in the recent **Assembly elections** is unlikely to allay growing concerns regarding the integrity of the election process.

भारत निर्वाचन आयोग (ECI) की **24 दिसंबर** को कांग्रेस पार्टी द्वारा हाल की **विधानसभा चुनावों** में **मतदाता टर्नआउट डेटा** पर लगाए गए आरोपों पर दी गई स्पष्टीकरण से चुनाव प्रक्रिया की **ईमानदारी** को लेकर बढ़ती चिंताओं को शांत करने की संभावना नहीं है।

- On **December 20**, on the recommendations of the ECI, the Centre had amended the **Conduct of Election Rules** to restrict public access to **poll documents** except for those that are specifically mentioned in them.

20 दिसंबर को, ECI की सिफारिशों पर, केंद्र ने **चुनाव नियमों** में संशोधन किया ताकि सार्वजनिक **मतदान दस्तावेजों** तक पहुंच को सीमित किया जा सके, सिवाय उनके जो इन दस्तावेजों में विशेष रूप से उल्लेखित हैं।

- The ECI has also said it does not want to share **CCTV footage** of the booth, citing **privacy** and **security reasons**.

ECI ने यह भी कहा है कि वह बूथ के **CCTV फुटेज** को **गोपनीयता** और **सुरक्षा कारणों** से साझा नहीं करना चाहता।

- This change in the rules happened after the **Punjab and Haryana High Court** directed the ECI to share all documents related to the **Haryana Assembly elections**, including **CCTV footage**, to a private citizen.

यह नियमों में बदलाव **पंजाब और हरियाणा उच्च न्यायालय** के आदेश के बाद हुआ, जिसमें ECI को **हरियाणा विधानसभा चुनावों** से संबंधित सभी दस्तावेज, जिसमें **CCTV फुटेज** भी शामिल था, एक निजी नागरिक को साझा करने के लिए कहा गया।

- The court ruled that this was permissible under **93(2) of the Rules** which allowed public access to all "papers" which were not specifically barred.

अदालत ने यह निर्णय लिया कि यह **नियमों के 93(2)** के तहत अनुमति प्राप्त था, जो उन सभी "कागजों" तक सार्वजनिक पहुंच की अनुमति देता है जो विशेष रूप से प्रतिबंधित नहीं थे।

- The amended rule now says that only those “papers” that are specified in it are open to public inspection.
  संशोधित नियम अब कहता है कि केवल वे "कागजात" जो इसमें निर्दिष्ट हैं, वे सार्वजनिक निरीक्षण के लिए खुले हैं।
- For an institution that is so central to the functioning of democracy, and yet facing an **unprecedented challenge** to its **credibility**, less secrecy and more **transparency** must be the way forward.
  एक ऐसी संस्था के लिए जो लोकतंत्र के संचालन में इतनी केंद्रीय भूमिका निभाती है, और फिर भी अपनी **विश्वसनीयता** को लेकर **असाधारण चुनौती** का सामना कर रही है, कम गोपनीयता और अधिक **पारदर्शिता** को आगे बढ़ने का रास्ता होना चाहिए।
- Allegations of **electronic tampering of voting machines** are misplaced and misguided, but concerns regarding the conduct of elections — **police high-handedness**, **partisanship of local administration**, and **voter suppression** through various means — are valid.
  मतदान मशीनों में इलेक्ट्रॉनिक छेड़छाड़ के आरोप गलत और भ्रामक हैं, लेकिन चुनावों के संचालन को लेकर **पुलिस की अत्याचारिता**, **स्थानीय प्रशासन का पक्षपाती रवैया**, और विभिन्न तरीकों से **मतदाता दमन** की चिंताएं वैध हैं।
- They require a thorough and impartial investigation.
  इन्हें एक गहरी और **निष्पक्ष जांच** की आवश्यकता है।
- Of particular concern is the **dramatic rise** in **voter turnout** in the final figures, compared to what was announced at the end of polling time, noticed in recent elections.
  विशेष रूप से चिंता का विषय है कि हाल की चुनावों में मतदान समय के अंत में घोषित आंकड़ों की तुलना में **अंतिम आंकड़ों** में **मतदाता टर्नआउट** में **नाटकीय वृद्धि** देखी गई।
- The ECI may well be right in saying that voters who are in queue at the closing hour get recorded only in the final figures.
  ECI यह कहने में सही हो सकता है कि जो मतदाता बंद होने के समय लाइन में खड़े होते हैं, उन्हें केवल **अंतिम आंकड़ों** में ही रिकॉर्ड किया जाता है।
- But the easiest and perhaps the most credible way to establish this claim is to allow wide inspection of the relevant **video footage**.
  लेकिन इस दावे को स्थापित करने का सबसे आसान और शायद सबसे विश्वसनीय तरीका है संबंधित **वीडियो फुटेज** की व्यापक जांच की अनुमति देना।
- The ECI has explained that the **candidates** have access to all **documents, papers** and records and nothing has been amended in the rules in this regard.
  ECI ने यह स्पष्ट किया है कि **उम्मीदवारों** को सभी **दस्तावेजों**, **कागजातों** और रिकॉर्ड्स तक पहुंच है और इस संदर्भ में नियमों में कुछ भी संशोधित नहीं किया गया है।
- It remains unclear how its officials will deal with requests from **candidates** for records including **video footage** while the public will face a default denial in most cases.

यह स्पष्ट नहीं है कि इसके अधिकारी **उम्मीदवारों** से रिकॉर्ड्स, जिनमें **वीडियो फुटेज** भी शामिल हैं, के लिए अनुरोधों को कैसे संभालेंगे, जबकि अधिकांश मामलों में जनता को डिफ़ॉल्ट रूप से इनकार करना पड़ेगा।

- The **privacy** and **security arguments** are weak if candidates can access records anyway.
  गोपनीयता और **सुरक्षा** के तर्क कमजोर हैं यदि उम्मीदवार किसी भी स्थिति में रिकॉर्ड्स तक पहुंच सकते हैं।
- In effect, the change in rules does not solve any problem that the ECI says it does, other than **time** and **effort**.
  प्रभाव में, नियमों में बदलाव किसी भी समस्या को हल नहीं करता जिसे ECI ने बताया है, **समय** और **प्रयास** के अलावा।
- And it has raised more questions about the **ECI's intentions**.
  और इसने **ECI के इरादों** को लेकर और अधिक सवाल उठाए हैं।

Myth of meritocracy, caste-based disparities in IT sector

GS Paper III: Inequality

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India's IT sector is one of the fastest growing industries in the country, contributing over 7% to India's GDP, so much so that the sub-Saharan African countries look to follow its lessons to replicate India's success in software exports. The performance-driven and high-paying nature of jobs in the IT sector make it a preferred career destination for millions of Indian youth. The job market in this industry is often touted as the epitome of skill-based meritocracy and inclusivity, with the social backgrounds of candidates playing no role in their hiring.

What NSSO data show

However, an empirical test of the inclusivity-promoting image of IT reveals a different reality. Analysis by the writers of this article based on household surveys by the National Sample Survey Office (NSSO) unravels stark caste-based disparities in employment probabilities and wage earnings in the IT industry, indicating that social inequalities are significantly alive in the job market.

The study utilises two rounds of NSSO surveys: NSS 78th (2020-21) and NSS 68th rounds (2011-12), which are representative at the national level. The study's sample comprises 29,289 individuals, with 20,437 drawn from the NSS 78th round and 8,852 from the 68th round for India. The variation in the selected sample size from the two periods is due to the variation in the overall sample covered under these surveys. The employment probabilities were estimated after controlling for observable factors that could influence the outcome variable. Industries that are dominated by the public sector were used as the benchmark in the probability estimation.

The study finds that the probability of Scheduled Castes (SC) and Scheduled Tribes (ST) to be engaged in the IT sector is only 10% in comparison to upper castes (27%). The finding remains robust even after accounting for differences in educational attainment and other individual characteristics such as gender and regional background (rural and urban). Surprisingly, this disparity in employment probabilities has increased over time from 2011-12 to 2020-21, though both caste groups were at a relatively disadvantaged position in the first time period than the later period. In 2011-12, lower caste groups faced only 6% probability of being engaged in the IT sector as compared to 17% for upper castes. Thus, while the overall employment probabilities for engagement in the IT sector increased for both caste groups, the deficit of lower castes went up from 11% in 2011-12 to 17% in 2020-21. This suggests that as the IT sector grows, it fails to address or even acknowledge the social barriers that exclude marginalised groups.

> An empirical test of the inclusivity-promoting image of IT shows the reality

The study also reveals that even when lower caste groups manage to enter the IT job market, they face labour segmentation as reflected in caste-based disparities in wage earnings. SC and Other Backward Classes workers in the IT sector face negative wage differentials of 24.9% and 22.5%, respectively, as compared to upper caste workers, even after accounting for differences in educational attainment and type of employment (regular verus temporary).

These findings align with the labour market segmentation theory, which predicts a division of the labour market into dualistic segments (lower and upper labour segments), with workers in the lower segment facing structural barriers in upward mobility. The findings indicate that lower castes are relegated to the lower segments of the job market, facing limited returns to private investments in education and skills.

Gender inequality

The labour market disparities in IT also affect other vulnerable sections, especially women. Female workers in IT earn 26.2% lower than males, irrespective of their caste, though their employment probabilities are closer to that of men. Labour market segmentation, particularly in a high-growth and high-paying sector such as IT, has far-reaching socio-economic implications. By systematically excluding a significant portion of the population, the industry not only sacrifices economic efficiency but also undermines social justice.

Diversity in the workplace is widely seen as an important source of comparative advantage. According to a report by the International Labour Organization in 2022, higher levels of diversity at the workplace are associated with greater productivity and innovations. The Network for Business Sustainability (in Canada) reported that each 1% increase in racial diversity in upper and lower management is associated with a yearly firm productivity gain between $729 and $1,590 per worker. Yet, the Indian IT sector's reluctance to embrace true diversity risks stifling its potential for sustainable growth. Further, it discourages the marginalised sections from investing in skill development, trapping them in a vicious circle of poverty.

The policy steps needed

Several policy steps are needed to address these inequalities. First, all companies should be required to publicly disclose their workforce diversity matrix, and make it public on their website. Such transparency can encourage accountability and motivate employers to prioritise diversity, without imposing specific quotas. Second, lower-caste entrepreneurs should be provided with greater incentives and training for entrepreneurship in high productivity sectors to boost their economic participation. Finally, bridging the skill gap among the marginalised sections can pave the way for a more equitable and inclusive job market.

Myth of meritocracy, caste-based disparities in IT sector

आईटी क्षेत्र में योग्यता का मिथक, जाति-आधारित असमानताएं

India's IT Sector and Caste-based Disparities in Employment
भारत के आईटी क्षेत्र और जाति आधारित रोजगार में भेदभाव

- India's **IT sector** is one of the **fastest growing industries** in the country, contributing over **7%** to India's **GDP**, and is seen as a model by **sub-Saharan African countries** to replicate India's success in **software exports**.
  भारत का **आईटी क्षेत्र** देश में सबसे **तेजी से बढ़ने वाले उद्योगों** में से एक है, जो भारत की **जीडीपी** में **7%** से अधिक का योगदान करता है, और यह **उप-सहारा अफ्रीकी देशों** द्वारा भारत की **सॉफ़्टवेयर निर्यात** में सफलता को दोहराने के रूप में देखा जाता है।
- The **performance-driven** and **high-paying nature of jobs** in the IT sector make it a preferred career destination for millions of Indian youth.
  आईटी क्षेत्र में **प्रदर्शन-आधारित** और **उच्च वेतन** वाली नौकरियां इसे भारतीय युवाओं के लिए एक पसंदीदा करियर गंतव्य बनाती हैं।
- The job market in this industry is often touted as the epitome of **skill-based meritocracy** and **inclusivity**, with the **social backgrounds** of candidates playing no role in their hiring.
  इस उद्योग में नौकरी बाजार को अक्सर **कौशल-आधारित मेरिटोक्रेसी** और **समावेशिता** का आदर्श बताया जाता है, जिसमें उम्मीदवारों की **सामाजिक पृष्ठभूमि** का उनकी नियुक्ति में कोई भूमिका नहीं होती।

What NSSO Data Show

NSSO डेटा क्या दिखाते हैं

- An empirical test of the **inclusivity-promoting** image of IT reveals a different reality, showing caste-based disparities in employment probabilities and wage earnings in the IT industry.
  आईटी के **समावेशिता को बढ़ावा देने वाली** छवि का एक अनुभवजन्य परीक्षण अलग वास्तविकता दिखाता है, जिसमें आईटी क्षेत्र में रोजगार की संभावना और वेतन में जाति-आधारित असमानताएं सामने आती हैं।
- **Analysis** by the writers of this article based on household surveys by the **National Sample Survey Office (NSSO)** uncovers stark caste-based disparities.
  इस लेख के लेखकों द्वारा **राष्ट्रीय नमूना सर्वेक्षण कार्यालय (NSSO)** द्वारा किए गए घरों के सर्वेक्षण पर आधारित **विश्लेषण** में जाति-आधारित असमानताएं स्पष्ट रूप से सामने आई हैं।

PATRIOTIC IAS

- The study utilizes **two rounds** of NSSO surveys: **NSS 78th (2020-21)** and **NSS 68th rounds (2011-12)**, representative at the national level.
  अध्ययन में **NSSO सर्वेक्षणों के दो दौर** का उपयोग किया गया है: **NSS 78वां (2020-21)** और **NSS 68वां दौर (2011-12)**, जो राष्ट्रीय स्तर पर प्रतिनिधित्व करते हैं।
- The study's sample comprises **29,289 individuals**, with **20,437** from the **NSS 78th round** and **8,852** from the **68th round** for India.
  अध्ययन का नमूना **29,289 व्यक्तियों** का है, जिसमें **20,437 NSS 78वां दौर** और **8,852 68वां दौर** से हैं।
- The variation in the selected sample size from the two periods is due to the variation in the overall sample covered under these surveys.
  दो दौरों में चयनित नमूने के आकार में भिन्नता इन सर्वेक्षणों के तहत कवर किए गए कुल नमूने में भिन्नता के कारण है।
- The **employment probabilities** were estimated after controlling for observable factors that could influence the outcome variable.
  रोजगार संभावनाओं का अनुमान उन **परिवर्तनीय तत्वों** को नियंत्रित करने के बाद लगाया गया जो परिणाम को प्रभावित कर सकते हैं।
- Industries dominated by the **public sector** were used as the benchmark in the probability estimation.
  संभावनाओं के अनुमान में सार्वजनिक क्षेत्र द्वारा **प्रभावित उद्योगों** का मानक के रूप में उपयोग किया गया।

Disparities in Employment Probabilities and Caste Groups

रोजगार संभावनाओं में भेदभाव और जाति समूह

- The probability of **Scheduled Castes (SC)** and **Scheduled Tribes (ST)** to be engaged in the IT sector is only **10%** compared to **upper castes (27%)**.
  अनुसूचित जाति (SC) और **अनुसूचित जनजाति (ST)** के **आईटी क्षेत्र** में कार्यरत होने की संभावना केवल **10%** है, जबकि **ऊपरी जातियों** के लिए यह **27%** है।
- The finding remains robust even after accounting for differences in **educational attainment** and other individual characteristics such as **gender** and **regional background** (rural and urban).
  यह निष्कर्ष **शैक्षिक स्तर** और अन्य व्यक्तिगत विशेषताओं जैसे **लिंग** और **क्षेत्रीय पृष्ठभूमि** (ग्रामीण और शहरी) में भिन्नताओं को ध्यान में रखने के बावजूद मजबूत बना रहता है।
- Surprisingly, this disparity in employment probabilities has increased over time from **2011-12** to **2020-21**, although both caste groups were in a relatively disadvantaged position in the first time period.
  आश्चर्यजनक रूप से, रोजगार संभावनाओं में यह असमानता **2011-12** से **2020-21** तक समय के साथ बढ़ी है, हालांकि दोनों जाति समूह पहले समय में अपेक्षाकृत **वंचित स्थिति** में थे।
- In **2011-12**, lower caste groups faced only **6%** probability of being engaged in the IT sector, compared to **17%** for upper castes.

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2011-12 में, निचली जाति समूहों को केवल **6%** संभावना थी आईटी क्षेत्र में कार्यरत होने की, जबकि ऊपरी जातियों के लिए यह **17%** थी।

- While overall **employment probabilities** for engagement in the IT sector increased for both caste groups, the deficit for lower castes rose from **11%** in 2011-12 to **17%** in 2020-21.
  हालांकि **आईटी क्षेत्र में** दोनों जाति समूहों के लिए **रोजगार संभावनाएं** बढ़ी, लेकिन निचली जातियों का घाटा **11%** से **17%** तक बढ़ गया।
- This suggests that as the IT sector grows, it fails to address or even acknowledge the **social barriers** that exclude marginalized groups.
  यह सुझाव देता है कि जैसे-जैसे आईटी क्षेत्र बढ़ता है, यह **सामाजिक बाधाओं** को संबोधित करने या यहां तक कि **वंचित समूहों** को बाहर करने को स्वीकार करने में विफल रहता है।

Caste-based Wage Disparities in IT Sector
आईटी क्षेत्र में जाति आधारित वेतन भेदभाव

- The study reveals that even when **lower caste groups** manage to enter the IT job market, they face **labour segmentation**, as reflected in **caste-based wage disparities**.
  अध्ययन में यह सामने आया कि जब भी **निचली जाति के समूह** आईटी नौकरी बाजार में प्रवेश करते हैं, तो उन्हें **श्रम विभाजन** का सामना करना पड़ता है, जो **जाति आधारित वेतन भेदभाव** में परिलक्षित होता है।
- **SC** and **Other Backward Classes (OBC)** workers in the IT sector face negative wage differentials of **24.9%** and **22.5%**, respectively, as compared to **upper caste** workers, even after accounting for differences in **educational attainment** and **type of employment** (regular versus temporary).
  आईटी क्षेत्र में **SC** और **अन्य पिछड़ा वर्ग (OBC)** श्रमिकों को **24.9%** और **22.5%** के नकारात्मक वेतन भेदभाव का सामना करना पड़ता है, जबकि **ऊपरी जाति** के श्रमिकों की तुलना में, इसके बावजूद **शैक्षिक स्तर** और **नौकरी की प्रकार** (नियमित बनाम अस्थायी) में भिन्नताओं को ध्यान में रखा गया।
- These findings align with the **labour market segmentation theory**, which predicts a division of the labour market into **dualistic segments** (lower and upper), with workers in the lower segment facing structural barriers in upward mobility.
  ये निष्कर्ष **श्रम बाजार विभाजन सिद्धांत** के अनुरूप हैं, जो श्रम बाजार को **दोहरी श्रेणियों** (निचली और ऊपरी) में बांटने का अनुमान लगाता है, जिसमें निचली श्रेणी के श्रमिकों को ऊपर की ओर गतिशीलता में संरचनात्मक बाधाओं का सामना करना पड़ता है।
- The findings indicate that **lower castes** are relegated to the **lower segments** of the job market, facing limited returns on private investments in **education** and **skills**.
  ये निष्कर्ष यह बताते हैं कि **निचली जातियों** को नौकरी बाजार के **निचले हिस्सों** में धकेल दिया जाता है, जिससे **शिक्षा** और **कौशल** में निजी निवेश पर सीमित लाभ मिलते हैं।

Gender Inequality in the IT Sector

आईटी क्षेत्र में लिंग भेदभाव

- The **labour market disparities** in IT also affect other vulnerable sections, especially **women**.
  आईटी में **श्रम बाजार असमानताएं** अन्य संवेदनशील वर्गों को भी प्रभावित करती हैं, विशेष रूप से **महिलाओं** को।
- Female workers in IT earn **26.2%** lower than males, irrespective of their caste, though their **employment probabilities** are closer to that of men.
  आईटी में महिला श्रमिक पुरुषों से **26.2%** कम कमाती हैं, चाहे उनकी जाति कुछ भी हो, हालांकि उनकी **रोजगार संभावनाएं** पुरुषों के समान होती हैं।
- **Labour market segmentation**, particularly in a **high-growth** and **high-paying** sector such as IT, has far-reaching **socio-economic implications**.
  श्रम बाजार विभाजन, विशेष रूप से **उच्च वृद्धि** और **उच्च वेतन** वाले क्षेत्र जैसे आईटी में, इसके **सामाजिक-आर्थिक प्रभाव** दूरगामी होते हैं।
- By systematically excluding a significant portion of the population, the industry not only sacrifices **economic efficiency** but also undermines **social justice**.
  एक महत्वपूर्ण जनसंख्या के हिस्से को व्यवस्थित रूप से बाहर करके, यह उद्योग न केवल **आर्थिक दक्षता** की बलि देता है, बल्कि **सामाजिक न्याय** को भी कमजोर करता है।

Diversity in the Workplace

कार्यस्थल में विविधता

- **Diversity** in the workplace is widely seen as an important source of **comparative advantage**.
  कार्यस्थल में **विविधता** को व्यापक रूप से **सापेक्ष लाभ** का महत्वपूर्ण स्रोत माना जाता है।
- According to a report by the **International Labour Organization (ILO)** in **2022**, higher levels of **diversity** at the workplace are associated with greater **productivity** and **innovations**.
  इंटरनेशनल लेबर ऑर्गनाइजेशन (ILO) की **2022** की रिपोर्ट के अनुसार, कार्यस्थल पर **विविधता** के उच्च स्तरों से **उत्पादकता** और **नवाचार** में वृद्धि होती है।
- The **Network for Business Sustainability** in **Canada** reported that each **1% increase** in racial diversity in upper and lower management is associated with a yearly firm **productivity gain** between **$729** and **$1,590 per worker**.
  कनाडा में **नेटवर्क फॉर बिजनेस सस्टेनेबिलिटी** ने रिपोर्ट किया कि ऊपरी और निचले प्रबंधन में **जातीय विविधता** में **1% वृद्धि** से हर साल प्रति श्रमिक **$729** से **$1,590** के बीच **उत्पादकता लाभ** जुड़ा होता है।
- Despite these benefits, the **Indian IT sector's reluctance** to embrace true **diversity** risks stifling its potential for **sustainable growth**.

इन लाभों के बावजूद, **भारतीय आईटी क्षेत्र का प्रतिरोध** वास्तविक **विविधता** को अपनाने में इसके **सतत विकास** की संभावनाओं को कुचलने का खतरा है।

- Further, it discourages the **marginalized sections** from investing in **skill development**, trapping them in a **vicious circle** of poverty.
  इसके अलावा, यह **वंचित वर्गों** को **कौशल विकास** में निवेश करने से हतोत्साहित करता है, जिससे वे **गरीबी के दुष्चक्र** में फंस जाते हैं।

Policy Steps Needed to Address Inequalities

भेदभाव को संबोधित करने के लिए आवश्यक नीतिगत कदम

- Several **policy steps** are needed to address these inequalities.
  इन असमानताओं को दूर करने के लिए कई **नीतिगत कदम** आवश्यक हैं।
- **All companies** should be required to publicly disclose their **workforce diversity matrix** and make it public on their **website**.
  सभी कंपनियों को अपनी **कार्यबल विविधता मैट्रिक्स** को सार्वजनिक रूप से घोषित करने और इसे अपनी **वेबसाइट** पर प्रकाशित करने की आवश्यकता होनी चाहिए।
- Such transparency can encourage **accountability** and motivate employers to prioritize **diversity**, without imposing specific **quotas**.
  ऐसी पारदर्शिता **जवाबदेही** को बढ़ावा दे सकती है और नियोक्ताओं को **विविधता** को प्राथमिकता देने के लिए प्रेरित कर सकती है, बिना किसी विशेष **कोटा** के।
- **Lower-caste entrepreneurs** should be provided with greater **incentives** and **training** for entrepreneurship in **high productivity sectors** to boost their **economic participation**.
  निचली जाति के उद्यमियों को **उच्च उत्पादकता वाले क्षेत्रों** में उद्यमिता के लिए अधिक **प्रोत्साहन** और **प्रशिक्षण** प्रदान किया जाना चाहिए ताकि उनकी **आर्थिक भागीदारी** बढ़ सके।
- Finally, **bridging the skill gap** among the **marginalized sections** can pave the way for a more **equitable** and **inclusive job market**.
  अंत में, **वंचित वर्गों** के बीच **कौशल अंतर को पाटना** एक अधिक **न्यायपूर्ण** और **समावेशी नौकरी बाजार** के लिए रास्ता प्रशस्त कर सकता है।

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PCS: Pegasus Probe

Damning silence

U.S. court ruling gives fresh cause to reopen India's stalled Pegasus probe

A U.S. court's decision holding an Israeli company liable for surreptitiously installing Pegasus, a spyware suite, on the phones of targeted individuals through WhatsApp, has brought the focus back on the Centre's questionable inaction when such surveillance allegations surfaced in India in 2021. The U.S. District Court for Northern District of California ruled that NSO Group Technologies violated both federal and State laws against computer fraud and abuse. WhatsApp sued the NSO Group in October 2019, alleging that its system was used by the Israeli company to plant malware on approximately 1,400 mobile phones and devices for surveilling their users. In a summary judgment, the court agreed with WhatsApp that its application had been reverse-engineered or 'decompiled' to create a modified version called 'WhatsApp Installation Server' or WIS. In the backdrop of this ruling, the question that arises in India is about the fate of reports submitted by a court-appointed expert committee in 2022 to the Supreme Court of India. The then Chief Justice of India (CJI), N.V. Ramana, had read out a few paragraphs from the report of the panel's overseeing judge, Justice (retired) R.V. Raveendran. The report said the Technical Committee found no conclusive evidence on the presence of Pegasus, but there was some kind of malware in five out of the 29 phones examined. The reports are yet to be made public.

Even if there was no effective hearing or follow-up action, what cannot be forgotten is that CJI Ramana had observed in open court that the government did not cooperate with the committee's investigation. It was conduct typical of the Modi regime, which has repeatedly demonstrated that silence, denial and obfuscation form its stock responses whenever allegations emerge. It showed no interest in probing disclosures that the phones of journalists, activists, doctors and court staff were targets of spyware. It made a strange claim that the country had such ironclad laws that illegal surveillance was not possible. It adopted the untenable position that acknowledging that its agencies possessed any particular software would jeopardise national security. All this, despite admitting in Parliament that it was aware of some users being targeted by Pegasus through WhatsApp. It did not respond to credible reports that Pegasus may have been used to plant evidence on computers to frame dissidents. In the light of a judicial decision, albeit an overseas one, that the NSO Group is liable for the use of its spyware by its clients, solely government entities, the time has come for sealed reports to be opened and deeper probes begun. The government should come clean on whether it possesses surveillance software. Otherwise, citizens will be rendered even more vulnerable to illegal surveillance.

Damning silence

शापित चुप्पी

U.S. Court's Decision on NSO Group
यू.एस. कोर्ट का एनएसओ ग्रुप पर निर्णय

- A **U.S. court** held an **Israeli company**, NSO Group Technologies, liable for installing **Pegasus** spyware on the phones of targeted individuals through **WhatsApp**.

एक **यू.एस. कोर्ट** ने **इजरायली कंपनी** एनएसओ ग्रुप टेक्नोलॉजीज़ को **पेगासस** स्पाईवेयर को लक्षित व्यक्तियों के फोन पर **व्हाट्सएप** के माध्यम से इंस्टॉल करने के लिए जिम्मेदार ठहराया।

- The **U.S. District Court for Northern District of California** ruled that NSO Group violated both **federal** and **state laws** against **computer fraud** and **abuse**.

नॉर्दर्न डिस्ट्रिक्ट ऑफ कैलिफोर्निया की यू.एस. डिस्ट्रिक्ट कोर्ट ने निर्णय दिया कि एनएसओ ग्रुप ने **संघीय** और **राज्य कानूनों** का उल्लंघन किया, जो **कंप्यूटर धोखाधड़ी** और **दुरुपयोग** के खिलाफ हैं।

- WhatsApp **sued** NSO Group in **October 2019**, claiming its system was used to plant malware on **1,400 mobile phones and devices** for **surveillance**.

व्हाट्सएप ने **अक्टूबर 2019** में एनएसओ ग्रुप पर **मुक़दमा** दायर किया, यह दावा करते हुए कि इसका सिस्टम **1,400 मोबाइल फोन और उपकरणों** में **मैलवेयर** लगाने के लिए इस्तेमाल किया गया था।

- In a **summary judgment**, the court agreed with WhatsApp that its application was reverse-engineered or 'decompiled' to create a modified version called **WhatsApp Installation Server (WIS)**.

एक **संक्षिप्त निर्णय** में कोर्ट ने व्हाट्सएप के साथ सहमति जताई कि इसके एप्लिकेशन को **रिवर्स-इंजीनियर** या 'डीकंपाइल' किया गया था ताकि एक संशोधित संस्करण **व्हाट्सएप इंस्टॉलेशन सर्वर (WIS)** बनाया जा सके।

India's Pegasus Case and the Supreme Court
भारत का पेगासस मामला और सर्वोच्च न्यायालय

- In **2022**, a **court-appointed expert committee** submitted a report to the **Supreme Court of India**, finding no conclusive

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evidence of **Pegasus**, but **malware** in 5 of 29 phones examined.
2022 में, एक **कोर्ट-नियुक्त विशेषज्ञ समिति** ने **भारत के सर्वोच्च न्यायालय** में एक रिपोर्ट पेश की, जिसमें **पेगासस** का कोई निर्णायक प्रमाण नहीं पाया गया, लेकिन जांचे गए 29 फोन में से 5 में **मैलवेयर** पाया गया।

- The reports from this committee are yet to be made **public**.
  इस समिति की रिपोर्ट अभी तक **सार्वजनिक** नहीं की गई है।
- **CJI N.V. Ramana** had observed in open court that the **government did not cooperate** with the committee's investigation.
  CJI एन.वी. रमना ने खुले कोर्ट में यह टिप्पणी की थी कि सरकार समिति की जांच में **सहयोग नहीं कर रही** थी।

Government's Response to Allegations

सरकार की आरोपों पर प्रतिक्रिया

- The **Modi regime** has consistently shown a pattern of **silence, denial, and obfuscation** in response to allegations of illegal surveillance.
  मोदी शासन ने अवैध निगरानी के आरोपों के जवाब में लगातार **चुप्पी, इनकार और उलझाव** का तरीका अपनाया है।
- The government showed no interest in investigating reports of **spyware** targeting **journalists**, **activists**, **doctors**, and **court staff**.
  सरकार ने **पत्रकारों**, **कार्यकर्ताओं**, **चिकित्सकों**, और **न्यायालय कर्मचारियों** के **स्पाइवेयर** द्वारा लक्षित किए जाने की रिपोर्टों की जांच में कोई रुचि नहीं दिखाई।
- The government claimed that the country had such **ironclad laws** that illegal surveillance was **impossible**, and that acknowledging any possession of such software would jeopardize **national security**.
  सरकार ने यह दावा किया कि देश में **कठोर कानून** हैं जो अवैध निगरानी को **असंभव** बनाते हैं, और इस तरह के सॉफ़्टवेयर के होने की स्वीकृति **राष्ट्रीय सुरक्षा** को खतरे में डाल सकती है।
- Despite this, the government **admitted in Parliament** that it was aware of some users being targeted by **Pegasus** through WhatsApp.
  इसके बावजूद, सरकार ने **संसद में स्वीकार किया** कि वह जानती थी कि कुछ उपयोगकर्ताओं को व्हाट्सएप के माध्यम से **पेगासस** द्वारा लक्षित किया गया था।
- The government did not respond to **credible reports** suggesting that **Pegasus** may have been used to plant **evidence** on computers to frame dissidents.
  सरकार ने **विश्वसनीय रिपोर्टों** का कोई जवाब नहीं दिया, जो यह संकेत देती थीं कि **पेगासस** का उपयोग **साक्ष्य** को कंप्यूटरों पर लगाने के लिए किया जा सकता था ताकि **विरोधियों** को फंसाया जा सके।

Need for Transparency and Action

पारदर्शिता और कार्रवाई की आवश्यकता

- In light of the **judicial decision** against the NSO Group, the **sealed reports** should be opened, and a **deeper probe** into the surveillance issue should begin.
  एनएसओ ग्रुप के खिलाफ **न्यायिक निर्णय** के आलोक में, **सीलबंद रिपोर्टों** को खोला जाना चाहिए, और निगरानी मुद्दे पर एक **गहरी जांच** शुरू की जानी चाहिए।
- The government should come clean on whether it possesses **surveillance software**, as otherwise, citizens will remain vulnerable to **illegal surveillance**.
  सरकार को यह स्पष्ट करना चाहिए कि क्या उसके पास **निगरानी सॉफ़्टवेयर** है, क्योंकि अन्यथा नागरिक **अवैध निगरानी** के लिए और भी अधिक संवेदनशील हो जाएंगे।

India got 14.3% of global remittances in 2024, its highest ever

GS Paper III: National Accounting

China secured only 5.3% of global remittances in 2024, its lowest share in at least two decades

DATA POINT

Vignesh Radhakrishnan

In 2024, India received an estimated $129.1 billion worth of remittances, the highest ever for a country in any year. Moreover, India's share in global remittances was 14.3% this year, the highest such share since the turn of the millennium for any country. The conclusions are based on a blog article published last week by the World Bank.

Remittances refer to the money that individuals working abroad send back to support their families in their home country. They are often a crucial source of income for households in developing countries and can contribute significantly to the economy of the recipient country.

Following India, Mexico and China received the largest remittances in 2024. **Chart 1** shows the top 10 receivers of remittances in $ million in 2024. The Philippines, France, Pakistan, Bangladesh, Egypt, Guatemala, and Germany are the other countries on the list.

While China was third on the list, past years' numbers provide interesting insights. **Chart 2** shows the share of global remittances for the top 10 countries mentioned in Chart 1 in the 2000-2024 period. China's share of remittances grew from less than 1% in the early 2000s to over 10% by the late 2000s and early 2010s, matching India's numbers, before gradually declining to below 10% in the late 2010s. From 2020, the share declined rapidly reaching a two-decade low of 5.3% in 2024. According to the World Bank, China's rising economic prosperity and an ageing population slowed the pace of emigration of less-skilled people, which contributed to this decline.

India's share has remained above the 10% mark for most of the years since 2000, with few exceptions. In fact, in the post-pandemic years, there has been a rapid increase in its share. India's share in global remittances was twice the share of Mexico's in 2024 (7.5%); Mexico was a distant second.

Though India leads in absolute remittance inflows, in some economies, remittances play a more critical role in funding current account deficits and fiscal shortfalls. To better understand this, **Chart 3** depicts estimated remittances in 2024 as a share of a country's GDP. Each circle is a country. The farther the circle is to the right, the higher the remittance in 2024 as a share of GDP. The bigger the circle, the higher the remittance in 2024 in absolute figures.

In Nepal, remittances formed over 25% of the GDP in 2024. In Tajikistan, Nicaragua, Lebanon, Samoa, Honduras, and Tonga, the share of remittances in 2024 formed over 25% of their respectives GDPs. In India, remittances formed 3.3% of the GDP this year.

For many low-and middle-income countries, remittances act as a major source of income. In 2024, these countries received $685 billion as remittances, the highest ever in a year. According to the blog, remittances to these countries have consistently outpaced other types of external financial flows.

In recent years, remittances have even surpassed Foreign Direct Investment (FDI) in low-and middle-income countries put together. FDIs are investments by a foreign country to control or run a business in another country. Remittances are also much higher than the official development assistance (ODA) received by these countries. ODA is the aid from rich countries to help poorer ones develop, often through grants or cheap loans. **Chart 4** compares remittances, FDI, and ODA received by low-and middle-income countries between 2000 and 2024. Over the past decade, remittances increased by 57% while FDI declined by 41% in low-and middle-income nations, the blog notes.

India and China's diverging paths

The data for the charts were sourced from a blog article published by the World Bank on December 18 and authored by Dilip Ratha, Sonia Plaza and Eung Ju Kim

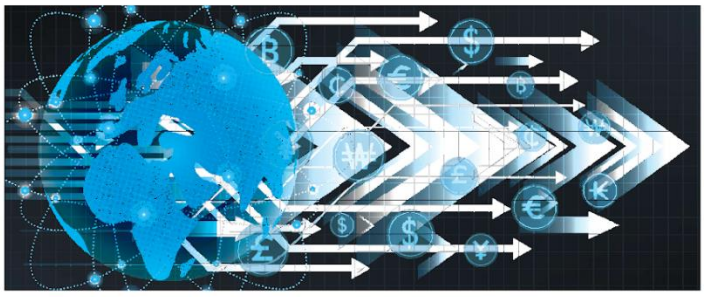
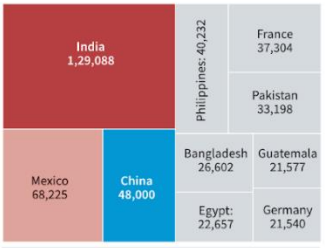


Chart 1: The chart shows the top 10 receivers of remittances in $ million in 2024 (estimated)



Remittances refer to the money that individuals working abroad send back to support their families in their home country

Chart 3: The chart depicts estimated remittances in 2024 as a share of a country's GDP

Chart 2: The share of global remittances for the top 10 countries mentioned in Chart 1 in the 2000-2024 period

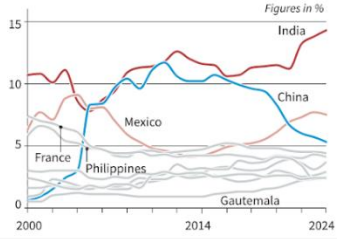
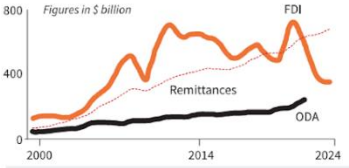


Chart 4: Chart compares remittances, FDI, and ODA received by low-and middle-income countries



FDIs are investments by a foreign country to control or run a business in another country.
ODA is the aid from rich countries to help poorer ones develop, often through grants or cheap loans

India got 14.3% of global remittances in 2024, its highest ever

2024 में भारत को वैश्विक प्रेषण का 14.3% प्राप्त होगा, जो अब तक का सर्वाधिक है

India's Record Remittances in 2024
2024 में भारत की रिकॉर्ड प्रेषण

- In **2024**, India received an estimated **$129.1 billion** worth of **remittances**, the **highest ever** for any country in any year.
  2024 में, भारत को अनुमानित **$129.1 बिलियन** मूल्य के **प्रेषण** प्राप्त हुए, जो किसी भी देश के लिए किसी भी वर्ष में **अब तक का उच्चतम** है।
- India's share in global remittances was **14.3%** in 2024, the **highest share** since the turn of the millennium for any country.
  2024 में, भारत का वैश्विक प्रेषण में **14.3%** हिस्सा था, जो किसी भी देश के लिए सहस्राब्दी की शुरुआत के बाद का **सबसे ऊंचा हिस्सा** था।
- The conclusions are based on a blog article published by the **World Bank** last week.
  ये निष्कर्ष **विश्व बैंक** द्वारा पिछले सप्ताह प्रकाशित एक ब्लॉग लेख पर आधारित हैं।

Remittances: A Vital Source of Income
प्रेषण: आय का एक महत्वपूर्ण स्रोत

- **Remittances** refer to money sent by individuals working abroad to support their families in their home country.
  प्रेषण उस पैसे को कहा जाता है जो विदेश में काम करने वाले व्यक्ति अपने परिवारों का समर्थन करने के लिए अपने गृह देश में भेजते हैं।
- They are a crucial source of income for households in **developing countries** and can contribute significantly to the economy of the recipient country.
  ये **विकसितशील देशों** में घरों के लिए आय का एक महत्वपूर्ण स्रोत होते हैं और प्राप्तकर्ता देश की अर्थव्यवस्था में महत्वपूर्ण योगदान कर सकते हैं।

Top Remittance Receivers in 2024
2024 में शीर्ष प्रेषण प्राप्त करने वाले देश

- **Mexico** and **China** received the largest remittances after India in **2024**.
  2024 में, भारत के बाद **मेक्सिको** और **चीन** ने सबसे अधिक प्रेषण प्राप्त किए।
- Other countries on the list include the **Philippines**, **France**, **Pakistan**, **Bangladesh**, **Egypt**, **Guatemala**, and **Germany**.

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सूची में अन्य देशों में **फिलीपींस**, **फ्रांस**, **पाकिस्तान**, **बांगलादेश**, **मिस्र**, **ग्वाटेमाला**, और **जर्मनी** शामिल हैं।

China's Remittance Share Over the Years
चीन का प्रेषण में हिस्सेदारी पिछले वर्षों में

- While **China** was third on the list, its share of remittances has varied over the years.
  हालांकि **चीन** सूची में तीसरे स्थान पर था, इसका प्रेषण में हिस्सा वर्षों के साथ बदलता रहा है।
- China's share grew from **less than 1%** in the early 2000s to **over 10%** by the late 2000s and early 2010s, matching India's numbers.
  चीन का हिस्सा 2000 के दशक की शुरुआत में **1% से कम** था और 2000 के अंत तथा 2010 की शुरुआत तक यह **10% से अधिक** हो गया, जो भारत के आंकड़ों से मेल खाता था।
- However, this share gradually declined, reaching a **two-decade low of 5.3%** in **2024**.
  हालांकि, यह हिस्सा धीरे-धीरे घटा और **2024** में यह **दो दशकों का न्यूनतम स्तर 5.3%** तक पहुँच गया।
- According to the **World Bank**, **China's rising economic prosperity** and an **ageing population** slowed the pace of emigration, contributing to the decline.
  विश्व बैंक के अनुसार, **चीन की बढ़ती आर्थिक समृद्धि** और **बुजुर्ग होती जनसंख्या** ने पलायन की गति को धीमा किया, जो इस गिरावट का कारण बना।

India's Consistent Share in Global Remittances
भारत का वैश्विक प्रेषण में लगातार हिस्सा

- India's share in global remittances has **remained above 10%** for most of the years since 2000, with **few exceptions**.
  भारत का वैश्विक प्रेषण में हिस्सा 2000 के बाद से अधिकांश वर्षों में **10% से ऊपर** रहा है, जिसमें **कुछ अपवाद** हैं।
- In fact, in the **post-pandemic years**, there has been a **rapid increase** in India's share.
  महामारी के बाद के वर्षों में, भारत के हिस्से में **तेज वृद्धि** देखी गई है।
- India's share in global remittances was **twice that of Mexico's (7.5%)** in **2024**.
  2024 में, भारत का वैश्विक प्रेषण में हिस्सा **मेक्सिको (7.5%)** के हिस्से से **दो गुना** था।

Importance of Remittances in Certain Economies
कुछ अर्थव्यवस्थाओं में प्रेषण का महत्व

- While India leads in **absolute remittance inflows**, in some economies, remittances play a more **critical role** in funding **current account deficits** and **fiscal shortfalls**.
  जबकि भारत **कुल प्रेषण प्रवाह** में अग्रणी है, कुछ अर्थव्यवस्थाओं में प्रेषण **वर्तमान खाता घाटे** और **राजकोषीय कमी** को पूरा करने में एक अधिक **महत्वपूर्ण भूमिका** निभाते हैं।

- **Chart 3** depicts estimated remittances in **2024** as a share of a country's **GDP**.
  चार्ट 3 में, **2024** में अनुमानित प्रेषण को देश की **जीडीपी** के हिस्से के रूप में दर्शाया गया है।
- In **Nepal**, remittances formed **over 25%** of the **GDP** in **2024**.
  नेपाल में, प्रेषण ने **2024** में **जीडीपी का 25% से अधिक** हिस्सा बना लिया।
- In countries like **Tajikistan**, **Nicaragua**, **Lebanon**, **Samoa**, **Honduras**, and **Tonga**, remittances formed **over 25%** of their respective GDPs in **2024**.
  देशों जैसे **ताजिकिस्तान**, **निकारागुआ**, **लेबनान**, **समोआ**, **होंडुरस**, और **टोंगा** में, प्रेषण ने **2024** में उनके **जीडीपी का 25% से अधिक** हिस्सा बनाया।
- In **India**, remittances formed **3.3%** of the **GDP** in **2024**.
  भारत में, प्रेषण ने **2024** में **जीडीपी का 3.3%** हिस्सा बनाया।

Remittances in Low and Middle-Income Countries
निम्न और मध्य-आय वाले देशों में प्रेषण

- In **2024**, low-and-middle-income countries received a record **$685 billion** in remittances, the highest ever in a year.
  2024 में, निम्न और मध्य-आय वाले देशों ने प्रेषण के रूप में रिकॉर्ड **$685 बिलियन** प्राप्त किए, जो किसी भी वर्ष में **अब तक का सबसे उच्चतम** था।
- Remittances to these countries have consistently outpaced other types of external financial flows.
  इन देशों में प्रेषण ने लगातार अन्य प्रकार के बाहरी वित्तीय प्रवाहों को पीछे छोड़ दिया है।
- In recent years, remittances have even surpassed **Foreign Direct Investment (FDI)** in low-and-middle-income countries.
  हाल के वर्षों में, प्रेषण ने निम्न और मध्य-आय वाले देशों में **विदेशी प्रत्यक्ष निवेश (FDI)** को भी पार कर लिया है।
- **FDI** is investment by a foreign country to control or run a business in another country.
  FDI वह निवेश है जो एक विदेशी देश दूसरे देश में व्यापार को नियंत्रित या चलाने के लिए करता है।
- Remittances are also much higher than **Official Development Assistance (ODA)** received by these countries.
  प्रेषण इन देशों द्वारा प्राप्त **आधिकारिक विकास सहायता (ODA)** से भी कहीं अधिक हैं।
- **Chart 4** compares remittances, FDI, and ODA received by low-and-middle-income countries between **2000 and 2024**.
  चार्ट 4 में, **2000 और 2024** के बीच निम्न और मध्य-आय वाले देशों द्वारा प्राप्त प्रेषण, FDI और ODA की तुलना की गई है।
- Over the past decade, remittances increased by **57%**, while **FDI** declined by **41%** in these countries.
  पिछले दशक में, इन देशों में प्रेषण में **57%** की वृद्धि हुई, जबकि **FDI** में **41%** की गिरावट आई।

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What is quantum computing?

What are qubits and how do they work in quantum computing? How does a quantum computer solve problems faster than classical computers in specific tasks? Which challenges remain in building practical and scalable quantum computers?

GS Paper III: S&T

EXPLAINER

Tejasri Gururaj

The story so far:

Quantum computers are the talk of computer town. Their potential to solve complex problems much faster than classical computers is an intriguing proposition that stands to transform several industries. A quantum computer is based on the principles of quantum mechanics, an area of physics that deals with the smallest particles in the universe. In 1982, Richard Feynman proposed the idea of developing a computer that could simulate both quantum and classical physics but researchers realised classical computers, the computers of today, would struggle with the complexity of quantum systems. Thus the idea of a quantum computer was born.

What are the basics of quantum computing?

Classical computers work on the principles of classical physics. Their fundamental computing unit is the bit. Each bit represents one piece of information with two possible values, 0 or 1. It's possible to represent all types of information as a combination of 0s and 1s using the binary system.

Quantum computers rely on quantum bits, or qubits, to perform computations. Unlike classical bits, qubits can exist in the states 0, 1 or in a state that's partly 0 and partly 1. 'State' refers to all the possible values the qubit can have.

The ability of qubits to be in two states is known as superposition. It's one of two fundamental principles that animate quantum computers. Imagine a spinning coin: while it's spinning, it can be both heads or tails, and it isn't until the coin collapses that you can see which it is. A qubit is like a spinning coin that holds both values simultaneously.

When a qubit is measured, it collapses to one of the values, 0 or 1. This means while a classical bit holds one unit of information, a qubit can hold two. Because of this, quantum computers can perform multiple computations simultaneously, with the measurement revealing one of the possible outcomes of the computations.

Breaking boundaries: In 2019, IBM unveiled the world's first circuit-based commercial quantum computer, Q System One. IBM RESEARCH

The second fundamental principle upon which quantum computers are based is called entanglement. This phenomenon allows qubits to be intrinsically linked no matter how far apart they physically are. Measuring the state of one of the qubits will immediately yield information about the state of the other. Say you have a pair of gloves. Each glove is put in a separate box and sent to different locations, and you don't know which box has which. But once a box is opened to reveal the left glove, you instantly know the other box has the right glove.

The instantaneous correlation between qubits speeds up computations that would take far longer with classical computers.

Superposition and entanglement are exclusive to quantum mechanics and central to the potential that quantum computers have to offer.

How far have quantum computers come?

Quantum computers are technologically superior but this doesn't automatically mean they will be better than classical computers at all tasks. Over the years, experts have developed specific tasks that prove quantum computers are capable of greater feats.

In 1994, Bell Labs computer scientist Peter Shor created the Shor's algorithm. It could find the factors of large numbers in moments rather than the millions of years required by classical computers. This has major implications for data security. Current methods to secure data involve locking the data and hiding the key in the solution of a difficult mathematical problem.

Large-number factorisation is one such problem and classical computers require enormous amounts of resources to solve it. But using Shor's algorithm, a quantum computer could quickly get the key and open the locks.

The state of quantum computing has come a long way since. In 2019, for example, IBM unveiled the world's first circuit-based commercial quantum computer, Q System One. Circuit-based designs are believed to be the most versatile for general quantum-computing applications. Q System One uses circuits composed of quantum gates that manipulate qubits, analogous to how classical computers use logic gates.

In the same year, researchers at Google reported in a paper in *Nature* that their 53-qubit 'Sycamore' processor had achieved quantum supremacy: when it can solve a problem that would take classical computers an unreasonable amount of time. The paper claimed Sycamore completed a task in 200 seconds that would have taken a supercomputer 10,000 years.

Earlier this month, Google unveiled a quantum chip called Willow, purportedly the world's first quantum processor in which error-corrected qubits improve as they scale. Quantum states are easily prone to errors due to interactions with the environment, so quantum computers need error correction to hold information long enough to perform useful calculations with them.

Willow, Google has said, can finish a standard test in five minutes whereas the same calculation could take today's best supercomputers 10 trillion trillion years.

What are the present limitations?

The advancements are flying thick and fast but there are still many significant challenges to overcome before quantum computers can become commonplace.

The chief concern is that building quantum computers remains expensive and complex. Keeping many qubits stable is also difficult because of error rates and decoherence (when a qubit loses superposition because of noise from its surroundings). The problems for which we really need quantum computers – like discovering new drugs or cracking mysteries in astronomy – also require millions of qubits.

All said, their potential to be useful is clear. This is why India launched the National Quantum Mission in 2023. The government has set aside ₹6,000 crore for the mission to be spent over eight years, among other things to develop quantum computers.

Tejasri Gururaj is a freelance science writer and journalist with a master's degree in physics

THE GIST

- Quantum computers rely on two key principles of quantum mechanics: superposition, where qubits can exist in multiple states, and entanglement, where qubits are linked, allowing them to share information instantly.
- Key milestones include Shor's algorithm, Google's Sycamore achieving quantum supremacy, and recent advancements such as the quantum chip Willow improving error correction.
- High costs, keeping qubits stable, and the need for large-scale qubits remain significant challenges, but initiatives like India's National Quantum Mission signal strong efforts to unlock their potential.

What is quantum computing?

क्वांटम कंप्यूटिंग क्या है?

What are qubits and how do they work in quantum computing? How does a quantum computer solve problems faster than classical computers in specific tasks? Which challenges remain in building practical and scalable quantum computers?

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क्वांटम कंप्यूटिंग में क्यूबिट क्या हैं और वे कैसे काम करते हैं? क्वांटम कंप्यूटर विशिष्ट कार्यों में क्लासिकल कंप्यूटरों की तुलना में समस्याओं को तेज़ी से कैसे हल करता है? व्यावहारिक और स्केलेबल क्वांटम कंप्यूटर बनाने में कौन सी चुनौतियाँ बाकी हैं?

Quantum Computers: The Future of Computing
क्वांटम कंप्यूटर: कंप्यूटिंग का भविष्य

- **Quantum computers** are gaining attention for their potential to solve **complex problems** faster than **classical computers**, transforming several industries.
  क्वांटम कंप्यूटर अपनी **जटिल समस्याओं** को **क्लासिकल कंप्यूटर** से कहीं तेजी से हल करने की संभावना के कारण ध्यान आकर्षित कर रहे हैं, जो कई उद्योगों में बदलाव ला सकते हैं।
- A **quantum computer** is based on the principles of **quantum mechanics**, an area of physics that deals with the smallest particles in the universe.
  क्वांटम कंप्यूटर क्वांटम यांत्रिकी के सिद्धांतों पर आधारित होता है, जो भौतिकी का एक क्षेत्र है जो ब्रह्मांड के सबसे छोटे कणों से संबंधित है।
- In **1982**, **Richard Feynman** proposed the idea of a computer that could simulate both **quantum** and **classical physics**, but researchers realized classical computers would struggle with quantum systems.
  1982 में, **रिचर्ड फेनमैन** ने ऐसे कंप्यूटर का विचार प्रस्तुत किया जो **क्वांटम** और **क्लासिकल भौतिकी** दोनों का अनुकरण कर सके, लेकिन शोधकर्ताओं ने महसूस किया कि क्लासिकल कंप्यूटर क्वांटम सिस्टम के साथ संघर्ष करेंगे।
- This led to the **birth of quantum computers**.
  इससे **क्वांटम कंप्यूटर** का **जन्म** हुआ।

Basics of Quantum Computing
क्वांटम कंप्यूटिंग के बुनियादी सिद्धांत

- **Classical computers** work on the principles of **classical physics**, and their fundamental computing unit is the **bit**.
  क्लासिकल कंप्यूटर क्लासिकल भौतिकी के सिद्धांतों पर काम करते हैं, और उनकी बुनियादी कंप्यूटिंग इकाई **बिट** होती है।
- Each **bit** represents one piece of information with two possible values: **0** or **1**.
  प्रत्येक **बिट** एक जानकारी का एक टुकड़ा होता है, जिसमें दो संभावित मान होते हैं: **0** या **1**।
- All types of information can be represented as a combination of **0s and 1s** using the **binary system**.
  सभी प्रकार की जानकारी को **0 और 1** के संयोजन के रूप में **बाइनरी सिस्टम** का उपयोग करके दर्शाया जा सकता है।

PATRIOTIC IAS

- **Quantum computers** use **quantum bits**, or **qubits**, to perform computations.
  क्वांटम कंप्यूटर क्वांटम बिट्स, या **क्विबिट्स**, का उपयोग करके गणनाएँ करते हैं।
- Unlike classical **bits**, **qubits** can exist in the states **0, 1**, or a state that's partly **0** and partly **1**.
  क्लासिकल **बिट्स** के विपरीत, **क्विबिट्स 0, 1** में या एक ऐसे राज्य में हो सकते हैं जो आंशिक रूप से **0** और आंशिक रूप से **1** हो।
- '**State**' refers to all the possible values the **qubit** can have.
  '**राज्य**' उस सभी संभावित मानों को संदर्भित करता है जो **क्विबिट** के पास हो सकते हैं।
- The ability of **qubits** to exist in two states is called **superposition**.
  क्विबिट्स के दो राज्यों में होने की क्षमता को **सुपरपोज़िशन** कहा जाता है।
- Imagine a **spinning coin**: while it's spinning, it can be both **heads** or **tails**, and it isn't until the coin collapses that you can see which it is.
  एक **घूमते हुए सिक्के** की कल्पना करें: जबकि यह घूम रहा होता है, यह **सिर** या **पंजे** दोनों हो सकता है, और जब तक सिक्का गिरता नहीं है, तब तक आप नहीं देख सकते कि यह क्या है।
- A **qubit** is like a **spinning coin** that holds both values simultaneously.
  एक **क्विबिट** एक **घूमते हुए सिक्के** की तरह होता है जो दोनों मानों को एक साथ रखता है।
- When a **qubit** is measured, it **collapses** to one of the values, either **0** or **1**.
  जब एक **क्विबिट** मापी जाती है, तो यह एक मान पर **गिर जाती है**, या तो **0** या **1**।
- This means a **classical bit** holds one unit of information, but a **qubit** can hold two.
  इसका मतलब है कि एक **क्लासिकल बिट** एक सूचना का एक मात्रक रखता है, जबकि एक **क्विबिट** दो रख सकता है।
- Because of this, **quantum computers** can perform multiple computations simultaneously.
  इसके कारण, **क्वांटम कंप्यूटर** एक साथ कई गणनाएँ कर सकते हैं।

Entanglement: The Second Fundamental Principle
एंटैंगलमेंट: दूसरा बुनियादी सिद्धांत

- The second fundamental principle upon which quantum computers are based is called **entanglement**.
  दूसरा बुनियादी सिद्धांत जिस पर क्वांटम कंप्यूटर आधारित होते हैं, उसे **एंटैंगलमेंट** कहा जाता है।
- **Entanglement** allows **qubits** to be **intrinsically linked**, no matter how far apart they are physically.
  एंटैंगलमेंट क्विबिट्स को **स्वाभाविक रूप से जुड़े** होने की अनुमति देता है, चाहे वे शारीरिक रूप से कितने भी दूर हों।
- Measuring the state of one qubit immediately reveals the state of the other.
  एक क्विबिट की स्थिति मापने से तुरंत दूसरी क्विबिट की स्थिति का पता चलता है।
- Imagine a pair of **gloves**: each glove is in a separate box, and once you open one box to reveal the left glove, you immediately know the other box has the right glove.
  एक **दस्ताने** के जोड़े की कल्पना करें: प्रत्येक दस्ताना एक अलग बॉक्स में होता है, और जैसे ही

आप एक बॉक्स खोलकर बाएं दस्ताने को दिखाते हैं, आप तुरंत जानते हैं कि दूसरे बॉक्स में दाहिना दस्ताना है।

- This **instantaneous correlation** between qubits speeds up computations that would take far longer with classical computers.
  क्विबिट्स के बीच यह **त्वरित सहसंबंध** उन गणनाओं को तेज करता है जो क्लासिकल कंप्यूटरों के साथ बहुत समय लेंगी।
- **Superposition** and **entanglement** are exclusive to **quantum mechanics** and are central to the potential that quantum computers offer.
  सुपरपोज़िशन और **एंटैंगलमेंट क्वांटम यांत्रिकी** के लिए विशेष हैं और ये उन संभावनाओं के केंद्रीय हैं जो क्वांटम कंप्यूटर प्रदान करते हैं।

How far have quantum computers come?
क्वांटम कंप्यूटर कितनी दूर पहुंचे हैं?

- **Quantum computers** are technologically **superior**, but this doesn't automatically mean they will be better than **classical computers** at all tasks.
  क्वांटम कंप्यूटर तकनीकी रूप से **श्रेष्ठ** हैं, लेकिन इसका यह मतलब नहीं है कि वे सभी कार्यों में **क्लासिकल कंप्यूटर** से बेहतर होंगे।
- Over the years, experts have developed **specific tasks** that prove quantum computers are capable of **greater feats**.
  वर्षों में, विशेषज्ञों ने **विशिष्ट कार्य** विकसित किए हैं जो यह साबित करते हैं कि क्वांटम कंप्यूटर **महत्वपूर्ण उपलब्धियों** को पूरा करने में सक्षम हैं।
- In **1994**, Bell Labs computer scientist **Peter Shor** created **Shor's algorithm**, which can find the factors of **large numbers** in moments, rather than the millions of years required by classical computers.
  1994 में, बेल लैब्स के कंप्यूटर वैज्ञानिक **पीटर शोर** ने **शोर का एल्गोरिदम** बनाया, जो **बड़े संख्याओं** के गुणनखंडों को कुछ क्षणों में ढूंढ सकता है, जबकि क्लासिकल कंप्यूटरों को इसके लिए लाखों साल लगते।
- This has **major implications for data security**, as current methods to secure data involve locking the data and hiding the key in the solution of a **difficult mathematical problem**.
  इसका **डेटा सुरक्षा** पर **महत्वपूर्ण प्रभाव** पड़ता है, क्योंकि वर्तमान में डेटा को सुरक्षित करने के तरीकों में डेटा को लॉक करना और एक **कठिन गणितीय समस्या** के समाधान में कुंजी को छिपाना शामिल है।
- **Large-number factorisation** is one such problem, and classical computers require enormous amounts of resources to solve it.
  बड़े संख्याओं के गुणनखंड एक ऐसा ही समस्या है, और क्लासिकल कंप्यूटरों को इसे हल करने के लिए विशाल संसाधनों की आवश्यकता होती है।
- But using **Shor's algorithm**, a **quantum computer** could quickly get the key and open the locks.

लेकिन **शोर के एल्गोरिदम** का उपयोग करके, एक **क्वांटम कंप्यूटर** जल्दी से कुंजी प्राप्त कर सकता है और ताले खोल सकता है।

The state of quantum computing
क्वांटम कंप्यूटिंग की स्थिति

- The state of **quantum computing** has come a long way.
  क्वांटम कंप्यूटिंग की स्थिति काफी दूर तक पहुंच चुकी है।
- In **2019**, **IBM** unveiled the world's first **circuit-based commercial quantum computer**, **Q System One**.
  2019 में, **आईबीएम** ने दुनिया का पहला **सर्किट-आधारित वाणिज्यिक क्वांटम कंप्यूटर**, **क्यू सिस्टम वन**, पेश किया।
- **Circuit-based designs** are believed to be the most **versatile** for general quantum-computing applications.
  सर्किट-आधारित डिज़ाइन को सामान्य क्वांटम कंप्यूटिंग अनुप्रयोगों के लिए सबसे **लचीला** माना जाता है।
- **Q System One** uses circuits composed of **quantum gates** that manipulate **qubits**, analogous to how classical computers use logic gates.
  क्यू सिस्टम वन ऐसे सर्किटों का उपयोग करता है जो **क्वांटम गेट्स** से बने होते हैं, जो **क्विबिट्स** को नियंत्रित करते हैं, जैसे क्लासिकल कंप्यूटर **लॉजिक गेट्स** का उपयोग करते हैं।
- In the same year, researchers at **Google** reported in a paper in **Nature** that their **53-qubit 'Sycamore' processor** had achieved **quantum supremacy**.
  उसी वर्ष, **गूगल** के शोधकर्ताओं ने **नेचर** में एक पेपर में रिपोर्ट किया कि उनका **53-क्विबिट 'साइकमोर' प्रोसेसर** ने **क्वांटम श्रेष्ठता** प्राप्त की है।
- **Quantum supremacy** means when a quantum computer can solve a problem that would take classical computers an **unreasonable amount of time**.
  क्वांटम श्रेष्ठता का मतलब है जब एक क्वांटम कंप्यूटर उस समस्या को हल कर सकता है, जिसे क्लासिकल कंप्यूटरों को हल करने में **अवास्तविक समय** लगता।
- The paper claimed **Sycamore** completed a task in **200 seconds** that would have taken a supercomputer **10,000 years**.
  पेपर में दावा किया गया कि **साइकमोर** ने एक कार्य **200 सेकंड** में पूरा किया, जिसे एक सुपरकंप्यूटर को **10,000 साल** लगते।
- Earlier this month, **Google** unveiled a **quantum chip** called **Willow**, purportedly the world's first quantum processor in which **error-corrected qubits** improve as they scale.
  इस महीने की शुरुआत में, **गूगल** ने एक **क्वांटम चिप विलो** का अनावरण किया, जो कथित तौर पर दुनिया का पहला क्वांटम प्रोसेसर है, जिसमें **त्रुटि-सुधारित क्विबिट्स** के आकार बढ़ने के साथ सुधार होते हैं।
- **Quantum states** are easily prone to errors due to interactions with the environment, so quantum computers need **error correction** to hold information long enough to perform useful calculations.

PATRIOTIC IAS

क्वांटम राज्य पर्यावरण के साथ इंटरएक्शन के कारण आसानी से त्रुटियों का शिकार हो सकते हैं, इसलिए क्वांटम कंप्यूटरों को **त्रुटि सुधार** की आवश्यकता होती है ताकि वे जानकारी को पर्याप्त समय तक पकड़ सकें और उपयोगी गणनाएँ कर सकें।

- **Willow** can finish a standard test in **five minutes**, while the same calculation could take today's best supercomputers **10 trillion trillion years**.
  विलो एक मानक परीक्षण को **पाँच मिनटों** में पूरा कर सकता है, जबकि वही गणना आज के सबसे अच्छे सुपरकंप्यूटरों को **10 ट्रिलियन ट्रिलियन साल** ले सकती है।

Present Limitations of Quantum Computers
क्वांटम कंप्यूटर की वर्तमान सीमाएँ

- **Advancements** are happening rapidly, but there are still many significant **challenges** to overcome before quantum computers can become **commonplace**.
  विकास तेजी से हो रहे हैं, लेकिन क्वांटम कंप्यूटरों को सामान्य रूप से उपयोग में लाने से पहले कई महत्वपूर्ण **चुनौतियाँ** अभी भी पार करनी हैं।
- The chief concern is that building quantum computers remains **expensive** and **complex**.
  मुख्य चिंता यह है कि क्वांटम कंप्यूटरों का निर्माण **महंगा** और **जटिल** बना हुआ है।
- Keeping many **qubits stable** is also difficult due to **error rates** and **decoherence** (when a qubit loses superposition because of noise from its surroundings).
  कई **क्विबिट्स** को स्थिर रखना भी **त्रुटि दर** और **डीकोहेरेंस** (जब एक क्विबिट अपने आसपास के शोर के कारण सुपरपोज़िशन खो देता है) के कारण मुश्किल है।
- The problems that quantum computers are meant to solve, like discovering **new drugs** or cracking mysteries in **astronomy**, require millions of **qubits**.
  वे समस्याएँ जिनका समाधान क्वांटम कंप्यूटरों द्वारा किया जाना है, जैसे **नई दवाओं** की खोज या **खगोलशास्त्र** में रहस्यों को हल करना, लाखों **क्विबिट्स** की आवश्यकता होती है।
- Despite these challenges, the potential of quantum computers to be useful is clear, which is why **India** launched the **National Quantum Mission** in **2023**.
  इन चुनौतियों के बावजूद, क्वांटम कंप्यूटरों के उपयोगी होने की क्षमता स्पष्ट है, यही कारण है कि **भारत** ने **2023** में **राष्ट्रीय क्वांटम मिशन** शुरू किया।
- The Indian government has set aside **₹6,000 crore** for the mission, to be spent over **eight years**, among other things to develop quantum computers. भारतीय सरकार ने मिशन के लिए **₹6,000 करोड़** निर्धारित किए हैं, जो **आठ वर्षों** में खर्च किए जाएंगे, जिसमें अन्य चीजों के अलावा क्वांटम कंप्यूटरों का विकास शामिल है।

PATRIOTIC IAS

Why are activists opposing EC's election rule amendment?

How has the Election Commission defended its decision to limit access to election documents?

GS Paper II: EC's election rule Amendment

Sreeparna Chakrabarty

The story so far:

The Centre on December 20 amended the Conduct of Election Rules to restrict access for the public to a section of poll documents. This was done by the Union Law Ministry following a recommendation from the Election Commission (EC). While the EC said the amendment aims to restrict access to electronic data, the Opposition and transparency activists have been up in arms, branding it as an attack on the right to information and electoral freedom.

What is the Conduct of Election Rules?

The Conduct of Election Rules,1961, is a set of rules which provide for provisions on how to conduct the elections as per the Representation of People Act.

What is the amendment?

This amendment was brought into effect through a notification issued by the Ministry of Law and Justice on December 20. Rule 93(2)(a) of the 1961 Conduct of Election Rules had earlier stated that "all other papers relating to the election shall be open to public inspection" but after the amendment, it reads, "all other papers as specified in these rules relating to the election shall be open to public inspection."

Why has the amendment been brought in now?

The move comes after a recent direction to the EC by the Punjab and Haryana High Court to share all documents related to the Haryana Assembly election, including treating CCTV footage also as permissible under Rule 93(2) of the Conduct of Election Rules, to petitioner Mahmoud Pracha.

According to a senior official of the EC, "The rule mentioned election papers. The election papers and documents does not specifically refer to electronic records. In order to remove this ambiguity and considering the serious issue of violation of secrecy of vote and potential misuse of CCTV footage of inside the polling station using artificial intelligence by a single person, the rule has been amended. The EC argues that sharing of CCTV footage may have serious repercussions, especially in sensitive areas where secrecy is important. All election papers and documents are otherwise available for public inspection."

Why are the transparency activists protesting?

According to transparency activist Anjali Bharadwaj, Rule 93 is akin to the Right to Information Act as far as elections are concerned and, any change hurts the citizen's right to know about the process.

Venkatesh Nayak, Director Commonwealth Human Rights Initiative explained further that "upon initial examination, the amendment appears to be aimed at restricting citizen-voters' right to access a large number of documents created during Parliamentary and State Assembly elections many of which are not specifically mentioned in the Conduct of Election Rules, instead, they are mentioned in the handbooks and manuals published by the Election Commission from time to time".

He said that given the controversy about voter turnout in recent Lok Sabha and Assembly polls, access to the Presiding Officers' diaries which contain detailed data about voter turnout and the number of tokens they distribute to voters who are in the queue at the hour scheduled for closing of polling are not mentioned specifically in the Conduct of Election Rules. "The amendment seeks to prevent access to such documents and many other reports and returns that are filed by various election officials".

What does the Opposition say?

The Congress claimed that a change in rules regarding the conduct of elections vindicated their assertions regarding the rapidly eroding integrity of the electoral process managed by the EC.

The Congress moved the Supreme Court against the amendments on Tuesday.

Congress President Mallikarjun Kharge has said it was part of a "systematic conspiracy to destroy the institutional integrity of the EC", while the Samajwadi Party and the Left parties accused the EC of "undermining multi-party democracy" by taking "unilateral" decisions without consulting all political parties.

THE GIST

The Centre amended the Conduct of Election Rules on December 20 to restrict public access to certain election-related documents, following a recommendation from the Election Commission.

The amendment has sparked controversy, with the Opposition and transparency activists accusing the EC of undermining transparency, the right to information, and electoral freedom.

Why are activists opposing EC's election rule amendment?

कार्यकर्ता चुनाव आयोग के चुनाव नियम संशोधन का विरोध क्यों कर रहे हैं?

The Centre Amends the Conduct of Election Rules
केंद्र ने चुनाव संचालन नियमों में संशोधन किया

- On **December 20**, the Centre amended the **Conduct of Election Rules** to restrict access for the public to a section of **poll documents**.
  20 दिसंबर को, केंद्र ने **चुनाव संचालन नियमों** में संशोधन किया ताकि जनता को **चुनाव दस्तावेजों** के कुछ हिस्सों तक पहुंच को सीमित किया जा सके।
- This amendment was made by the **Union Law Ministry** following a recommendation from the **Election Commission (EC)**.
  यह संशोधन **केंद्रीय विधि मंत्रालय** द्वारा **चुनाव आयोग (EC)** की सिफारिश पर किया गया।
- While the **EC** said the amendment aims to restrict access to **electronic data**, the **Opposition** and **transparency activists** have strongly protested, branding it as an attack on the **right to information** and **electoral freedom**.
  जबकि **चुनाव आयोग** ने कहा कि यह संशोधन **इलेक्ट्रॉनिक डेटा** की पहुंच को सीमित करने के

उद्देश्य से किया गया है, **विपक्ष** और **पारदर्शिता कार्यकर्ताओं** ने इसका कड़ा विरोध किया है, इसे **जानकारी के अधिकार** और **चुनावी स्वतंत्रता** पर हमला करार दिया है।

What is the Conduct of Election Rules?
चुनाव संचालन नियम क्या हैं?

- The **Conduct of Election Rules, 1961**, is a set of rules that provide provisions on how to conduct elections as per the **Representation of People Act**.
  चुनाव संचालन नियम, 1961 एक नियमों का सेट है जो **जनप्रतिनिधित्व अधिनियम** के तहत चुनावों को कैसे आयोजित करना है, इसके प्रावधान प्रदान करता है।

What is the amendment?
संशोधन क्या है?

- The amendment came into effect through a notification issued by the **Ministry of Law and Justice** on **December 20**.
  यह संशोधन **कानून और न्याय मंत्रालय** द्वारा **20 दिसंबर** को जारी किए गए एक अधिसूचना के माध्यम से प्रभावी हुआ।
- **Rule 93(2)(a)** of the **1961 Conduct of Election Rules** previously stated that "**all other papers relating to the election shall be open to public inspection**," but after the amendment, it now reads, "**all other papers as specified in these rules relating to the election shall be open to public inspection**."
  1961 के चुनाव संचालन नियमों के **नियम 93(2)(a)** में पहले कहा गया था कि "**चुनाव से संबंधित सभी अन्य दस्तावेज़ जनता की जांच के लिए उपलब्ध होंगे**," लेकिन संशोधन के बाद अब यह कहा गया है, "**चुनाव से संबंधित इन नियमों में निर्दिष्ट सभी अन्य दस्तावेज़ जनता की जांच के लिए उपलब्ध होंगे**।"

Why has the amendment been brought in now?
संशोधन अब क्यों लाया गया है?

- The move follows a recent direction by the **Punjab and Haryana High Court** to the **EC** to share all documents related to the **Haryana Assembly election**, including treating **CCTV footage** as permissible under **Rule 93(2)** of the Conduct of Election Rules.
  यह कदम **पंजाब और हरियाणा उच्च न्यायालय** द्वारा **चुनाव आयोग (EC)** को **हरियाणा विधानसभा चुनाव** से संबंधित सभी दस्तावेजों को साझा करने का आदेश देने के बाद उठाया गया है, जिसमें **सीसीटीवी फुटेज** को **चुनाव संचालन नियमों के नियम 93(2)** के तहत अनुमेय माना गया है।
- According to a senior official of the **EC**, the rule mentioned **election papers**, but it did not specifically refer to **electronic records**.
  चुनाव आयोग के एक वरिष्ठ अधिकारी के अनुसार, नियम में **चुनाव दस्तावेज** का उल्लेख था, लेकिन इसमें **इलेक्ट्रॉनिक रिकॉर्ड** का विशेष रूप से उल्लेख नहीं था।

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- To remove ambiguity and prevent potential misuse, such as the violation of **vote secrecy** and misuse of **CCTV footage** through **artificial intelligence**, the rule was amended.
  अस्पष्टता को दूर करने और संभावित दुरुपयोग, जैसे **मतदान गोपनीयता** का उल्लंघन और **सीसीटीवी फुटेज** का **कृत्रिम बुद्धिमत्ता** के माध्यम से दुरुपयोग रोकने के लिए नियम में संशोधन किया गया।
- The **EC** argues that sharing **CCTV footage** may have serious repercussions, especially in sensitive areas where secrecy is important.
  चुनाव आयोग का कहना है कि **सीसीटीवी फुटेज** को साझा करने के गंभीर परिणाम हो सकते हैं, खासकर उन संवेदनशील क्षेत्रों में जहाँ गोपनीयता महत्वपूर्ण है।
- **All election papers and documents** are otherwise available for **public inspection**.
  सभी चुनाव दस्तावेज़ और कागजात अन्यथा **सार्वजनिक निरीक्षण** के लिए उपलब्ध हैं।

Why are the transparency activists protesting?
पारदर्शिता कार्यकर्ता क्यों विरोध कर रहे हैं?

- According to transparency activist **Anjali Bharadwaj**, **Rule 93** is akin to the **Right to Information Act** concerning elections, and any change hurts the citizen's **right to know** about the process.
  पारदर्शिता कार्यकर्ता **अंजलि भारद्वाज** के अनुसार, **नियम 93** चुनावों के संदर्भ में **सूचना के अधिकार कानून** के समान है, और कोई भी बदलाव नागरिक के **प्रक्रिया जानने के अधिकार** को नुकसान पहुंचाता है।
- **Venkatesh Nayak**, Director of **Commonwealth Human Rights Initiative**, explained that the amendment appears to restrict citizen-voters' right to access a large number of **documents** created during **Parliamentary** and **State Assembly elections**.
  वेंकटेश नायक, **कॉमनवेल्थ ह्यूमन राइट्स इनिशिएटिव** के निदेशक, ने समझाया कि संशोधन से नागरिक मतदाताओं के **दस्तावेजों** तक पहुँच को प्रतिबंधित किया जा रहा है, जो **संसदीय** और **राज्य विधानसभा चुनावों** के दौरान बनाए गए थे।
- Many documents, including **Presiding Officers' diaries**, which contain detailed data about voter turnout, are not specifically mentioned in the **Conduct of Election Rules** but are in **handbooks** and **manuals** published by the **EC**.
  कई दस्तावेज़, जिसमें **प्रेसाइडिंग ऑफिसर्स की डायरी** शामिल हैं, जो मतदाता भागीदारी के बारे में विस्तृत डेटा प्रदान करती हैं, **चुनाव संचालन नियमों** में विशेष रूप से उल्लेखित नहीं हैं, बल्कि ये **हैंडबुक** और **मैन्युअल** में प्रकाशित होते हैं, जो **चुनाव आयोग** द्वारा समय-समय पर जारी किए जाते हैं।
- The amendment seeks to prevent access to such documents and reports that are filed by various **election officials**.
  संशोधन ऐसे दस्तावेजों और रिपोर्टों तक पहुँच को रोकने का प्रयास करता है जो विभिन्न **चुनाव अधिकारियों** द्वारा दाखिल किए गए हैं।

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What does the Opposition say?
विपक्ष क्या कहता है?

- The **Congress** claimed that the change in election rules vindicated their assertions about the rapidly eroding **integrity of the electoral process** managed by the **EC**.
  कांग्रेस ने कहा कि चुनाव नियमों में परिवर्तन ने उनके उस दावे को सही ठहराया है कि **चुनावी प्रक्रिया की ईमानदारी** जो **चुनाव आयोग** द्वारा प्रबंधित की जाती है, तेजी से कमजोर हो रही है।
- The **Congress** moved the **Supreme Court** against the amendments on **Tuesday**.
  कांग्रेस ने **मंगलवार** को इन संशोधनों के खिलाफ **सुप्रीम कोर्ट** में याचिका दायर की।
- **Congress President Mallikarjun Kharge** has stated it is part of a "systematic **conspiracy** to destroy the institutional integrity of the **EC**," while the **Samajwadi Party** and **Left parties** accused the **EC** of undermining **multi-party democracy** by making **unilateral decisions** without consulting all political parties.
  कांग्रेस अध्यक्ष मलिकार्जुन खड़गे ने कहा कि यह **चुनाव आयोग** की संस्थागत ईमानदारी को नष्ट करने के लिए एक "संवेदनशील **साजिश**" का हिस्सा है, जबकि **समाजवादी पार्टी** और **वामपंथी दलों** ने **चुनाव आयोग** पर **एकतरफा निर्णय** लेने का आरोप लगाया है, बिना सभी राजनीतिक पार्टियों से परामर्श किए।

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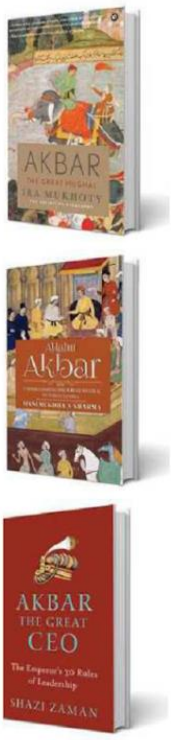

Noble legacy: Tomb of the third Mughal emperor in Sikandra in Agra. GETTY IMAGES

Management lessons from Akbar the Great's handbook

A new biography looks into Akbar's life to draw some inspiration on how to manage the boardroom. The third Mughal emperor was always thinking on his feet, one step ahead of friend and foe; but he also knew that force had to be tempered with tolerance, and confidence with caution

GS Paper I: Medieval History

Ziya Us Salam

Even as elements in the right-wing have made attempts to nibble at the great Jalaluddin Akbar, historians and authors have taken it upon themselves to project the third Mughal emperor clothed in nothing but facts of history.

Around the time of COVID-19, Ira Mukhoty came out with her exhaustive biography, *Akbar The Great Mughal: The Definitive Biography* (Aleph). It came on the heels of Manimugdha S. Sharma's *Allahu Akbar: Understanding the Great Mughal in Today's India* (Bloomsbury) where the author, as the title suggests, made an attempt to see the Mughal monarch in the light of modern-day developments.

The books show why Akbar is considered an Indian icon and a king with compassion and empathy. Instead of spending his childhood as a royal prince, practising calligraphy and honing his skills with the sword, Akbar lived those years, as Mukhoty writes, "in the company of his beloved animals and their keepers...He raced pigeons, ran alongside camels and dogs, and hunted cheetahs, lions, tiger, and deer. And Akbar tested his physical strength and courage against wild elephants, learning to ride and to tame them."

Akbar had grown up practically illiterate but would eventually be "known for his reverence for learning, penmanship, books...and would patronise some of the most extraordinary works of writing, translation and illustration ever undertaken in the country," Mukhoty points out.

This quest for knowing the unknown led Akbar to build Ibadat Khana, an assembly of scholars of different religions. Akbar's congregation of men of spiritual accomplishment was the work of a truly liberal mind. At a time when the Safavids were persecuting non-Shias in Iran and Europe had no space for non-Christians, Akbar invited them all. He abolished the religious tax, *jiziya*, for non-Muslims and did away with the pilgrimage tax on Hindus and was known to prevent Sati. As Sharma quotes Abul Fazl in *Allahu Akbar*, "The Shahenshah in his wisdom and tolerance remitted all these taxes, which amounted to crores. He looked upon such grasping of property as blameable and issued orders forbidding the levy thereof."

In simpler words, it meant, as Sharma writes, "The state wouldn't come in between an individual and his faith."

Beyond religion

Yet Akbar's relevance goes beyond the sphere of religion as noted journalist and author Shazi Zaman discusses in his latest, *Akbar The Great CEO: The Emperor's 30 Rules of Leadership*. Published by Speaking Tiger, the book has a contemporary, and non-historic feel to it. In its innovative approach lies its appeal. Zaman presents Akbar as a practitioner of some dictates which would do a management guru proud. Interestingly, the book opens with the words of a Jesuit priest stationed at Akbar's court. The priest wrote in awe, "He was a prince beloved of all, firm with the great, kind to those of low estate, and just to all men, high or low, neighbour or stranger, Christian, Saracen or Gentile; so that every man believed that the King was on his side." The priest's words were borne by the fact that Akbar, as Zaman writes, "perfected the art of ruling with a light touch even though he had the means to be brutal."

The surprise factor

So what were the 30 rules of Akbar? Though he ruled in an age when the Emperor was often larger than life, Akbar believed in subtlety. Importantly, as his experience with the Afghan king Daud Khan Karrani proved, Akbar was not just fast in his thinking, he was unpredictable too. When he would be least expected to show up in a battle, he would take the enemy by surprise, vanquish his forces, and bring him to his knees. "When the Rubicon was to be crossed was a call that he [Akbar] took in a manner so unpredictable that his opponents could never gain an advantage by guessing it," writes Zaman. "The Emperor's audacity was well documented visually as well... In one painting, he is seen holding a cheetah by its ear, and in another painting, he is seen mounted on a mast elephant and chasing another across a shaky bridge built on boats."

Zaman mentions another incident which underscores Akbar's acuity. When a slave attacked him, Akbar knew who was behind it but chose to remain quiet.

As Zaman writes, "Even the truth has to await its moment." Does it remind you of office boardroom meetings? Maybe. But remember this was the strategy of the Mughal emperor who was merely 21 at the time of the attack. He knew the truth, but also knew how to use it to his advantage later in life. Little wonder then that one of Akbar's favourite books which he also recommended to his officers was *Akhlaq-i-Nasiri*, a 13th century text on etiquette and way of life, which said, "The king should keep his secrets concealed, so that he can change his mind without sounding contradictory...The need to keep secrets has to be combined with the need to consult intelligent people." Akbar did it all. Be it his relationship with Maham Anga and Bairam Khan, or later the Rajputs, Akbar was always smart and wise. Zaman's book progresses like an equation in a science book as he goes on to reveal many facets of Akbar's personality.

Cultivated image

One such aspect was the way he looked, and the way he presented himself. "Akbar's image was cultivated, recorded and disseminated with a lot of thought. There was a message in how he dressed and looked and what he chose to be doing in the picture. Each portrait portrays a facet of his personality. It never was a picture for the sake of a picture," writes Zaman.

Written with the brush of an artist, the book is a must-read for anyone looking for life lessons and critical values, particularly in the boardroom. The 'illiterate' emperor was indeed a wise man, who never "went to extremes" in any direction.

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Management lessons from Akbar the Great's handbook

अकबर महान की पुस्तिका से प्रबंधन के सबक

A new biography looks into Akbar's life to draw some inspiration on how to manage the boardroom. The third Mughal emperor was always thinking on his feet, one step ahead of friend and foe; but he also knew that force had to be tempered with tolerance, and confidence with caution

बोर्डरूम को कैसे मैनेज किया जाए, इस पर कुछ प्रेरणा लेने के लिए एक नई जीवनी अकबर के जीवन पर नज़र डालती है। तीसरा मुगल बादशाह हमेशा अपने पैरों पर खड़ा रहता था, दोस्त और दुश्मन से एक कदम आगे रहता था; लेकिन वह यह भी जानता था कि बल को सहनशीलता के साथ और आत्मविश्वास को सावधानी के साथ संतुलित करना होगा

The Legacy of Akbar: A Historical Reassessment
अकबर की धरोहर: एक ऐतिहासिक पुनर्मूल्यांकन

- Elements in the **right-wing** have made attempts to undermine **Jalaluddin Akbar**, but historians and authors have taken it upon themselves to present the third **Mughal emperor** based purely on historical facts.
  दायेंपंथी तत्वों ने **जलालुद्दीन अकबर** को नीचा दिखाने की कोशिश की है, लेकिन इतिहासकारों और लेखकों ने तीसरे **मुगल सम्राट** को केवल ऐतिहासिक तथ्यों के आधार पर प्रस्तुत करने का जिम्मा उठाया है।
- Around the time of **COVID-19**, **Ira Mukhoty** released her comprehensive biography, *Akbar The Great Mughal: The Definitive Biography* (Aleph).
  कोविड-19 के समय के आस-पास, **इरा मुखर्जी** ने अपनी व्यापक जीवनी *अकबर द ग्रेट मुग़ल: द डेफिनिटिव बायोग्राफी* (एलेफ) प्रकाशित की।
- This came shortly after **Manimugdha S. Sharma's** *Allahu Akbar: Understanding the Great Mughal in Today's India* (Bloomsbury), which attempts to understand **Akbar** through the lens of modern-day India.
  यह **मणिमुग्धा एस. शर्मा** की *अल्लाहु अकबर: अंडरस्टैंडिंग द ग्रेट मुग़ल इन टुडे'स इंडिया* (ब्लूम्सबरी) के तुरंत बाद आया, जो **अकबर** को आज के भारत के संदर्भ में समझने की कोशिश करता है।

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- The books highlight why **Akbar** is considered an **Indian icon**, a king with **compassion** and **empathy**.
  ये किताबें यह बताती हैं कि क्यों **अकबर** को एक **भारतीय प्रतीक** और एक सम्राट के रूप में देखा जाता है जिनमें **दया** और **सहानुभूति** थीं।
- Instead of living his childhood as a royal prince, practicing calligraphy and swordsmanship, Akbar spent his early years, as **Mukhoty** writes, "in the company of his beloved animals and their keepers…"
  इरा मुखर्जी लिखती हैं कि **अकबर** ने राजकुमार के रूप में अपनी बचपन की जिंदगी नहीं बिताई, बल्कि वह अपने प्रिय जानवरों और उनके रखवाले के साथ समय बिताते थे।
- Akbar, who was practically illiterate as a child, would eventually be known for his **reverence for learning**, **penmanship**, and patronage of **extraordinary works** of translation and illustration.
  बचपन में **अकबर** लगभग निरक्षर थे, लेकिन वह अंततः **शिक्षा के प्रति सम्मान**, **हस्ताक्षर कला**, और **अद्वितीय लेखन** और अनुवाद कार्यों के संरक्षण के लिए जाने गए।
- Akbar's quest for knowledge led him to build the **Ibadat Khana**, an assembly of scholars from different religions.
  अकबर की ज्ञान की खोज ने उन्हें **इबादत खाना** बनाने के लिए प्रेरित किया, जो विभिन्न धर्मों के विद्वानों की सभा थी।
- Akbar's inclusive approach in inviting people of different religions, abolishing the **jiziya** tax, and preventing **Sati** marked him as a ruler with a liberal mindset.
  अकबर का समावेशी दृष्टिकोण, विभिन्न धर्मों के लोगों को आमंत्रित करना, **जिज़िया** कर को समाप्त करना और **सती** को रोकना, उन्हें एक उदार मानसिकता वाले शासक के रूप में स्थापित करता है।
- As **Sharma** quotes **Abul Fazl**, Akbar remitted taxes amounting to **crores**, seeing such taxes as "blameable" and forbidding them.
  शर्मा ने **अबुल फजल** का उद्धरण देते हुए कहा कि अकबर ने **करोड़ों** के करों को माफ कर दिया, उन्हें "ग़लत" मानते हुए उन्हें समाप्त कर दिया।
- **Akbar's** leadership extended beyond religious tolerance; his approach was also about **leadership** and **management** as discussed in **Shazi Zaman's** *Akbar The Great CEO: The Emperor's 30 Rules of Leadership*.
  अकबर का नेतृत्व केवल धार्मिक सहिष्णुता तक सीमित नहीं था; उनके दृष्टिकोण में **नेतृत्व** और **प्रबंधन** भी था, जैसा कि **शाज़ी ज़मान** की किताब *अकबर द ग्रेट सीईओ: द एम्परेर'स 30 रूल्स ऑफ लीडरशिप* में बताया गया है।
- The book presents **Akbar** as a practitioner of leadership strategies that would make a modern-day management guru proud.
  यह किताब **अकबर** को एक नेतृत्व रणनीति के कर्ता के रूप में प्रस्तुत करती है, जो एक आधुनिक **प्रबंधन गुरु** को गर्वित कर सकता है।
- **Zaman's book** opens with a **Jesuit priest's** description of Akbar, praising him as a prince beloved by all, just to everyone, and fair to all, regardless of religion or status.
  ज़मान की किताब की शुरुआत एक **जेसुइट पादरी** के द्वारा अकबर का वर्णन करते हुए होती है,

जिसमें उन्हें सभी का प्रिय, हर किसी के प्रति न्यायपूर्ण और धर्म या स्थिति की परवाह किए बिना सभी के प्रति समान माना गया है।

- **Akbar's unpredictability** in battle and his ability to take the enemy by surprise are highlighted as one of his key qualities.
  युद्ध में **अकबर की अप्रत्याशिता** और शत्रु को चौंकाने की उसकी क्षमता को उसकी प्रमुख विशेषताओं में से एक के रूप में दिखाया गया है।
- A key example of Akbar's tactical mind is the story where he knew the truth about an attack on him but chose to wait for the right moment to reveal it.
  अकबर की रणनीतिक सोच का एक प्रमुख उदाहरण वह घटना है, जब उन्होंने अपने ऊपर हमले के बारे में सत्य जाना, लेकिन उसे सही समय पर प्रकट करने का निर्णय लिया।
- Akbar's favorite book was **Akhlaq-i-Nasiri**, a 13th-century text on **etiquette** and **ways of life**, which advised rulers to keep secrets and consult intelligent people.
  अकबर की पसंदीदा किताब **अखलाक-ए-नासिरी** थी, जो 13वीं सदी का **शिष्टाचार** और **जीवन के तरीकों** पर आधारित एक पाठ था, जिसमें शासकों को राज़ रखना और बुद्धिमान लोगों से परामर्श करने की सलाह दी गई थी।
- The book **Akbar The Great CEO** also discusses Akbar's image, presenting how he cultivated and portrayed himself through portraits, each revealing different aspects of his personality.
  किताब **अकबर द ग्रेट सीईओ** में अकबर की छवि पर भी चर्चा की गई है, जिसमें यह बताया गया है कि उन्होंने अपनी पोर्ट्रेट्स के माध्यम से अपनी छवि कैसे बनाई और प्रस्तुत की, जिसमें उनकी व्यक्तिगत विशेषताओं के विभिन्न पहलू सामने आए।
- Written with a blend of **history** and **management wisdom**, the book is a valuable read for anyone looking for life lessons and leadership insights, especially in **boardroom** settings.
  इतिहास और **प्रबंधन बुद्धिमत्ता** का मिश्रण करते हुए लिखी गई यह किताब जीवन के पाठ और नेतृत्व के दृष्टिकोण के लिए एक मूल्यवान पढ़ाई है, खासकर **कार्यालय** सेटिंग्स में।
- The **'illiterate' emperor** was indeed a wise ruler, who never "went to extremes" in any direction.
  यह **'अशिक्षित' सम्राट** सच में एक बुद्धिमान शासक था, जिसने किसी भी दिशा में "अत्यधिक नहीं किया"।

PATRIOTIC IAS

President Murmu names Ajay Bhalla Manipur Governor

Former Union Minister General V. K. Singh (retd) appointed Mizoram Governor, while Kerala Governor Arif Khan will take up the post in Bihar

PCS

The Hindu Bureau
NEW DELHI

New roles: General V.K. Singh (retd) and Ajay Kumar Bhalla.

Former Union Home Secretary Ajay Bhalla has been appointed Governor of Manipur in the latest gubernatorial appointments and reshuffle by President Droupadi Murmu on Tuesday across five States.

The appointments include former Union Minister General V. K. Singh (retd) as Governor of Mizoram, and Kerala Governor Arif Mohammed Khan being made Governor of Bihar.

The President has accepted the resignation of Odisha Governor Raghubar Das.

The appointment to the Manipur Raj Bhavan is significant as the State has witnessed ethnic strife resulting in violence between the Meitei community and Kuki tribes since May 2023. Anusuiya Uikey was the last full-time Governor of the State and since July this year, Assam Governor Lakshman Prasad Acharya was holding additional charge.

Said to be close to Home Minister Amit Shah, Mr. Bhalla steered some of the key legislation such as the Citizenship (Amendment) Act, 2019 and the three new criminal laws during his tenure as the Home Secretary. A 1984-batch IAS officer of the Assam-Meghalaya cadre, he retired on August 22.

New Kerala governor

The change of Governor in Kerala is another politically significant move.

Mr. Khan had been having regular run-ins with the Left Front government in the State.

So, while he has been shifted to Bihar, the incumbent Bihar Governor, Rajendra Vishwanath Arlekar, has been named the new Governor of Kerala.

The incumbent Governor of Mizoram, Hari Babu Kambhampati, has been appointed Governor of Odisha.

A former chief of the Indian Army, Gen. Singh successfully contested the Lok Sabha polls twice (2014 and 2019) from the Ghaziabad seat in Uttar Pradesh on BJP ticket and was part of the Union Council of Ministers.

The party, however, did not offer him ticket in the 2024 Lok Sabha polls.

President Murmu names Ajay Bhalla Manipur Governor

राष्ट्रपति मुर्मू ने अजय भल्ला को मणिपुर का राज्यपाल नियुक्त किया

Former Union Minister General V. K. Singh (retd) appointed Mizoram Governor, while Kerala Governor Arif Khan will take up the post in Bihar

पूर्व केंद्रीय मंत्री जनरल वी. के. सिंह (सेवानिवृत्त) को मिजोरम का राज्यपाल नियुक्त किया गया, जबकि केरल के राज्यपाल आरिफ खान बिहार में पद संभालेंगे

Former Union Home Secretary Ajay Bhalla Appointed Governor of Manipur

पूर्व केंद्रीय गृह सचिव अजय भल्ला को मणिपुर का राज्यपाल नियुक्त किया गया

- **Ajay Bhalla**, former **Union Home Secretary**, has been appointed **Governor of Manipur** in the latest round of gubernatorial appointments by **President Droupadi Murmu** on Tuesday across five states.
  अजय भल्ला, पूर्व **केंद्रीय गृह सचिव**, को मंगलवार को राष्ट्रपति **द्रौपदी मुर्मू** द्वारा पांच राज्यों में किए गए नवीनतम राज्यपाल नियुक्तियों में **मणिपुर का राज्यपाल** नियुक्त किया गया है।
- The appointments also include **General V. K. Singh** (retd) as **Governor of Mizoram**, and **Arif Mohammed Khan** (Kerala Governor) being shifted to **Governor of Bihar**.
  इन नियुक्तियों में **जनरल वी. के. सिंह** (सेवानिवृत्त) को **मिजोरम का राज्यपाल** और **अरिफ मोहम्मद खान** (केरल के राज्यपाल) को **बिहार के राज्यपाल** के रूप में स्थानांतरित किया गया है।
- The President has accepted the **resignation of Odisha Governor Raghubar Das**.
  राष्ट्रपति ने **ओडिशा के राज्यपाल रघुबीर दास** का इस्तीफा स्वीकार कर लिया है।
- The **appointment to the Manipur Raj Bhavan** is significant as the state has witnessed **ethnic strife** between the **Meitei community** and **Kuki tribes** since May 2023.
  मणिपुर राजभवन में **नियुक्ति** महत्वपूर्ण है क्योंकि राज्य में **मेइती समुदाय** और **कुकी जनजातियों** के बीच मई 2023 से **जातीय संघर्ष** देखने को मिला है।

PATRIOTIC IAS

- **Anusuiya Uikey** was the last full-time Governor of the state, and since **July** 2023, **Assam Governor Lakshman Prasad Acharya** was holding additional charge.
  अनुसुया उइके राज्य की अंतिम पूर्णकालिक राज्यपाल थीं, और जुलाई 2023 से **असम के राज्यपाल लक्ष्मण प्रसाद आचार्य** को अतिरिक्त प्रभार सौंपा गया था।
- **Ajay Bhalla** is said to be close to **Home Minister Amit Shah** and played a significant role in key legislations such as the **Citizenship (Amendment) Act, 2019**, and the **three new criminal laws** during his tenure as Home Secretary.
  अजय भल्ला को **गृह मंत्री अमित शाह** के करीबी माना जाता है और उन्होंने **नागरिकता (संशोधन) अधिनियम, 2019** और गृह सचिव के रूप में अपने कार्यकाल के दौरान **तीन नए आपराधिक कानूनों** जैसे महत्वपूर्ण विधायकों में महत्वपूर्ण भूमिका निभाई।
- Bhalla, a **1984-batch IAS officer** of the **Assam-Meghalaya cadre**, retired on **August 22, 2023**.
  अजय भल्ला, **असम-मेघालय कैडर** के **1984 बैच के IAS अधिकारी**, ने **22 अगस्त 2023** को सेवानिवृत्त हुए।

New Kerala Governor Appointed
नया केरल राज्यपाल नियुक्त किया गया

- The change of **Governor in Kerala** is politically significant as **Arif Mohammed Khan** had regular run-ins with the **Left Front government** in the state.
  केरल में राज्यपाल का परिवर्तन राजनीतिक रूप से महत्वपूर्ण है क्योंकि **अरिफ मोहम्मद खान** का राज्य सरकार के साथ लगातार टकराव रहा था।
- **Arif Mohammed Khan** has been shifted to Bihar, and the current **Governor of Bihar**, **Rajendra Vishwanath Arlekar**, has been named the new **Governor of Kerala**.
  अरिफ मोहम्मद खान को बिहार स्थानांतरित किया गया है, और वर्तमान **बिहार के राज्यपाल राजेंद्र विष्णु आर्लेकर** को **केरल का नया राज्यपाल** नियुक्त किया गया है।
- The current **Governor of Mizoram**, **Hari Babu Kambhampati**, has been appointed **Governor of Odisha**.
  मिजोरम के वर्तमान राज्यपाल हरी बाबू कंभमपाटी को **ओडिशा का राज्यपाल** नियुक्त किया गया है।

General V. K. Singh's Political Background
जनरल वी. के. सिंह का राजनीतिक पृष्ठभूमि

- **General V. K. Singh**, a former chief of the **Indian Army**, successfully contested the **Lok Sabha elections** from the **Ghaziabad seat** in Uttar Pradesh in **2014** and **2019** on a **BJP ticket**.
  जनरल वी. के. सिंह, भारतीय सेना के पूर्व प्रमुख, ने उत्तर प्रदेश के **गाज़ियाबाद सीट** से **2014** और **2019** में **बीजेपी टिकट** पर **लोकसभा चुनाव** जीतने में सफलता प्राप्त की।

- However, the **BJP** did not offer him a ticket for the **2024 Lok Sabha elections**.
  हालांकि, **बीजेपी** ने उन्हें **2024 लोकसभा चुनाव** के लिए टिकट नहीं दिया।

Rooppur nuclear project is for well-being of people of Bangladesh: Russia's Rosatom

GS Paper II: India-Bangladesh-Russia

NEW DELHI

Russian nuclear major Rosatom on Tuesday said the Bangladesh anti-graft commission's remarks are "an attempt to discredit" the Rooppur nuclear power project. The project also led to a tripartite agreement among Bangladesh, Russia and India which was signed in March 2018.

In a statement issued to the media, Rosatom reiterated that the $12.65 billion Rooppur project is transparent and that it is ready to defend the case in a court of law. The unusual disturbance in Dhaka-Moscow relation coincided with deepening engagement between Bangladesh and the U.S. On Tuesday, U.S. National Security Advisor Jake Sullivan spoke with Bangladesh Chief Adviser Prof. Mohammad Yunus and "reiterated the United States' support" for the "challenges" facing Bangladesh.

The statement from Rosatom came a day after the Anti-Corruption Commission of Bangladesh came out with a statement alleging that deposed Prime Minister Sheikh Hasina and her family members including her niece Tulip Siddiq, an MP in the U.K,, laundered $900 million to offshore outfits in Malaysia. The commission stated it has discovered around $5 billion "irregularities" in the Rooppur nuclear power project that has been in the works since 2011.

U.S. NSA Sullivan assures Yunus of support to deal with "challenges" facing Bangladesh

Rooppur nuclear project is for well-being of people of Bangladesh: Russia's Rosatom

रूपपुर परमाणु परियोजना बांग्लादेश के लोगों की भलाई के लिए है: रूस के रोसाटॉम

Rosatom Responds to Bangladesh Anti-Corruption Commission's Remarks
रोसाटॉम ने बांगलादेश भ्रष्टाचार निरोधक आयोग की टिप्पणी पर प्रतिक्रिया दी

- **Russian nuclear major Rosatom** stated that **Bangladesh Anti-Corruption Commission's remarks** are "an attempt to discredit" the **Rooppur nuclear power project**.
  रूस की परमाणु कंपनी रोसाटॉम ने कहा कि **बांगलादेश भ्रष्टाचार निरोधक आयोग की टिप्पणियाँ** "रोप्पुर परमाणु ऊर्जा परियोजना को बदनाम करने का प्रयास" हैं।
- The **Rooppur project** also led to a **tripartite agreement** among **Bangladesh, Russia**, and **India**, signed in **March 2018**.
  रोप्पुर परियोजना ने **बांगलादेश, रूस** और **भारत** के बीच **मार्च 2018** में हस्ताक्षरित **त्रिपक्षीय समझौता** भी किया।
- In a statement, Rosatom reiterated that the **$12.65 billion** Rooppur project is **transparent** and that it is ready to defend the case in a **court of law**.
  एक बयान में, रोसाटॉम ने दोहराया कि **$12.65 बिलियन** की रोप्पुर परियोजना **पारदर्शी** है और वह इसे **कानूनी अदालत** में बचाने के लिए तैयार है।
- The disturbance in **Dhaka-Moscow relations** coincided with **deepening engagement** between **Bangladesh** and the **U.S.**.
  ढाका-मास्को संबंधों में असामान्य उतार-चढ़ाव का मेल **बांगलादेश** और **अमेरिका** के बीच **गहरे होते संबंधों** से हुआ।
- On Tuesday, **U.S. National Security Advisor Jake Sullivan** spoke with **Bangladesh Chief Adviser Prof. Mohammad Yunus** and "reiterated the United States' support" for the challenges facing Bangladesh.

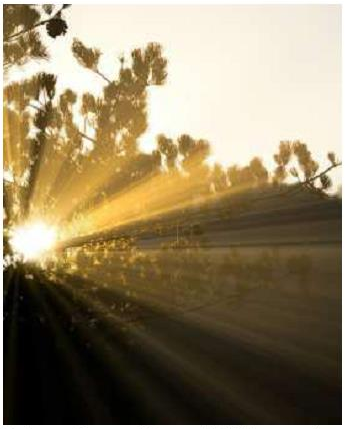
मंगलवार को, **अमेरिका के राष्ट्रीय सुरक्षा सलाहकार जैक सुलिवन** ने **बांगलादेश के मुख्य सलाहकार प्रोफ. मोहम्मद युनुस** से बात की और बांगलादेश के सामने आने वाली **चुनौतियों** के लिए **संयुक्त राज्य अमेरिका का समर्थन** दोहराया।

- The statement from Rosatom came a day after the **Anti-Corruption Commission of Bangladesh** alleged that deposed **Prime Minister Sheikh Hasina** and her family members, including her niece **Tulip Siddiq** (a U.K. MP), laundered **$900 million** to offshore outfits in **Malaysia**.
  रोसाटॉम का बयान, **बांगलादेश भ्रष्टाचार निरोधक आयोग** द्वारा यह आरोप लगाने के एक दिन बाद आया कि उखाड़ फेंकी गई **प्रधानमंत्री शेख हसीना** और उनके परिवार के सदस्य, जिनमें उनकी भतीजी **तुलिप सिद्धिक** (यू.के. की सांसद) भी शामिल हैं, ने **$900 मिलियन** को **मलेशिया** में ऑफशोर कंपनियों में धोखाधड़ी से भेजा।
- The Commission stated that it has discovered around **$5 billion** worth of **"irregularities"** in the Rooppur nuclear power project, which has been in development since **2011**.
  आयोग ने कहा कि उसने **रोप्पुर परमाणु ऊर्जा परियोजना** में लगभग **$5 बिलियन** की **"अनियमितताएँ"** खोजी हैं, जो **2011** से विकास के चरण में है।

The universe's speed limit

GS Paper III: S&T

Q: How do we know the speed of light?
A: After centuries of developing improved instruments to measure everything in the physical world with increasing precision, scientists have agreed to define the speed of light as precisely 299,792,458 m/s. Their agreement redefines their yardstick, in this case the metre, in terms of the speed of light rather than the other way around.
Before that, calculations of the speed of light were conventionally based on how long it took a pulse of light to cover a known distance. Because the speed of light is so great, it had to be a very great distance, and comparatively accurate measurements had to await the development of sensitive modern instruments.
The first practical estimate was made in 1676 by Ole Roemer, a Danish astronomer then working at the Royal Observatory in Paris. Roemer noticed when studying the eclipses of Jupiter's moons that the intervals between the disappearance of some of the moons behind the planet varied with distances between Jupiter and the earth. He reasoned that the velocity of light was responsible for an apparent delay in the eclipse when Jupiter was more distant from the earth. He calculated the speed of light to be around 225,300 km/s.
Roemer did not know the precise distance to Jupiter, so his estimate was considerably different from modern figures of around 299,792 km/s, give or take a few billionths of a second. These estimates are made with a laser beam and an atomic clock.



Modern estimates of the speed of light are made with a laser beam and an atomic clock. THOMAS KINTO

For feedback and suggestions for 'Science', please write to **science@thehindu.co.in** with the subject 'Daily page'

The universe's speed limit

ब्रह्माण्ड की गति सीमा

How Do We Know the Speed of Light?
हम प्रकाश की गति को कैसे जानते हैं?

- After centuries of developing improved instruments to measure everything in the physical world with increasing precision, scientists have agreed to define the **speed of light** as precisely **299,792,458 m/s**.
  शारीरिक दुनिया में हर चीज को बढ़ती सटीकता के साथ मापने के लिए सदियों तक उन्नत उपकरणों के विकास के बाद, वैज्ञानिकों ने **प्रकाश की गति** को **299,792,458 मीटर/सेकंड** के रूप में परिभाषित करने पर सहमति जताई है।
- Their agreement redefines their **yardstick**, in this case the **metre**, in terms of the speed of light rather than the other way around.

उनका यह समझौता उनके **यार्डस्टिक** (यहां मीटर) को प्रकाश की गति के संदर्भ में पुनर्परिभाषित करता है, बजाय इसके कि यह अन्यथा होता।

- Before that, calculations of the speed of light were conventionally based on how long it took a **pulse of light** to cover a known distance.
  इससे पहले, प्रकाश की गति की गणना पारंपरिक रूप से इस पर आधारित थी कि **प्रकाश की एक पल्स** को एक ज्ञात दूरी को तय करने में कितना समय लगता है।
- Because the speed of light is so great, it had to be a very great distance, and comparatively accurate measurements had to await the development of **sensitive modern instruments**.
  चूंकि प्रकाश की गति इतनी महान है, इसलिए इसे एक **बहुत बड़ी दूरी** तय करनी होती थी, और तुलनात्मक रूप से सटीक माप को **संवेदनशील आधुनिक उपकरणों** के विकास का इंतजार करना पड़ा।
- The first practical estimate was made in **1676** by **Ole Roemer**, a Danish astronomer then working at the **Royal Observatory in Paris**.
  पहली वास्तविक अनुमान **1676** में **ओले रोमेर** द्वारा किया गया था, जो उस समय **पेरिस के रॉयल ऑब्जर्वेटरी** में काम कर रहे थे।
- Roemer noticed when studying the eclipses of **Jupiter's moons** that the intervals between the disappearance of some of the moons behind the planet varied with distances between **Jupiter** and the **earth**.
  रोमेर ने जब **ग्रहणों** का अध्ययन किया, तो उन्होंने देखा कि **बृहस्पति के चंद्रमाओं** के ग्रहण के समय जो अंतराल थे, वे **बृहस्पति** और **पृथ्वी** के बीच की दूरी के साथ बदलते थे।
- He reasoned that the velocity of light was responsible for an **apparent delay** in the eclipse when **Jupiter** was more distant from the **earth**.
  उन्होंने अनुमान लगाया कि जब **बृहस्पति** पृथ्वी से दूर था, तो ग्रहण में एक **आभासी देरी** के लिए प्रकाश की गति जिम्मेदार थी।
- He calculated the speed of light to be around **225,300 km/s**.
  उन्होंने प्रकाश की गति को लगभग **225,300 किमी/सेकंड** के रूप में गणना किया।
- Roemer did not know the precise distance to **Jupiter**, so his estimate was considerably different from modern figures of around **299,792 km/s**, give or take a few billionths of a second.
  रोमेर को **बृहस्पति** की सटीक दूरी का पता नहीं था, इसलिए उनका अनुमान आधुनिक आंकड़ों से काफी अलग था, जो लगभग **299,792 किमी/सेकंड** है, जो कुछ **नैनोसेकंड** तक बढ़-घट सकता है।
- These estimates are made with a **laser beam** and an **atomic clock**.
  ये अनुमान **लेजर बीम** और **एटॉमिक घड़ी** के माध्यम से किए जाते हैं।

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